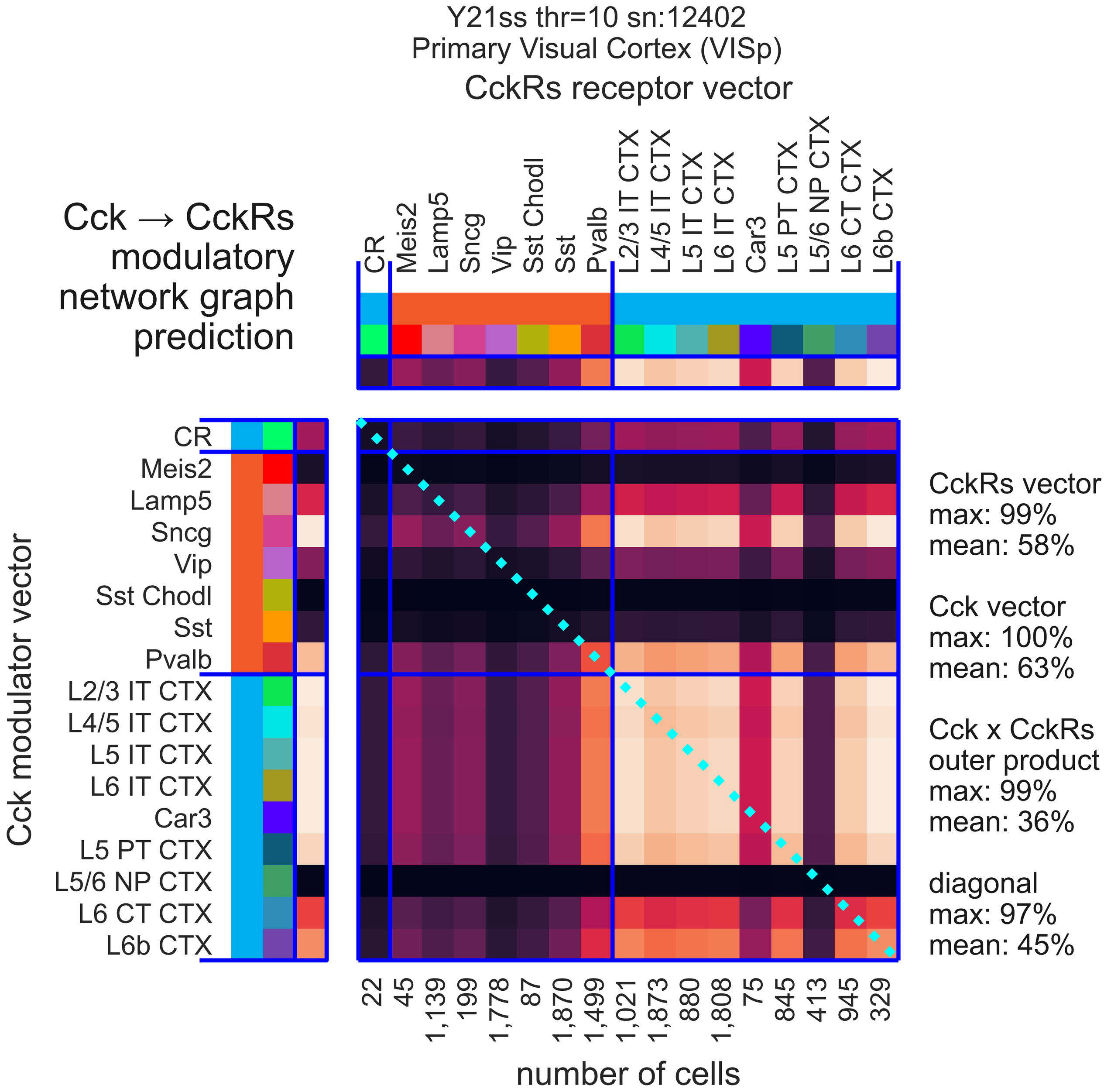
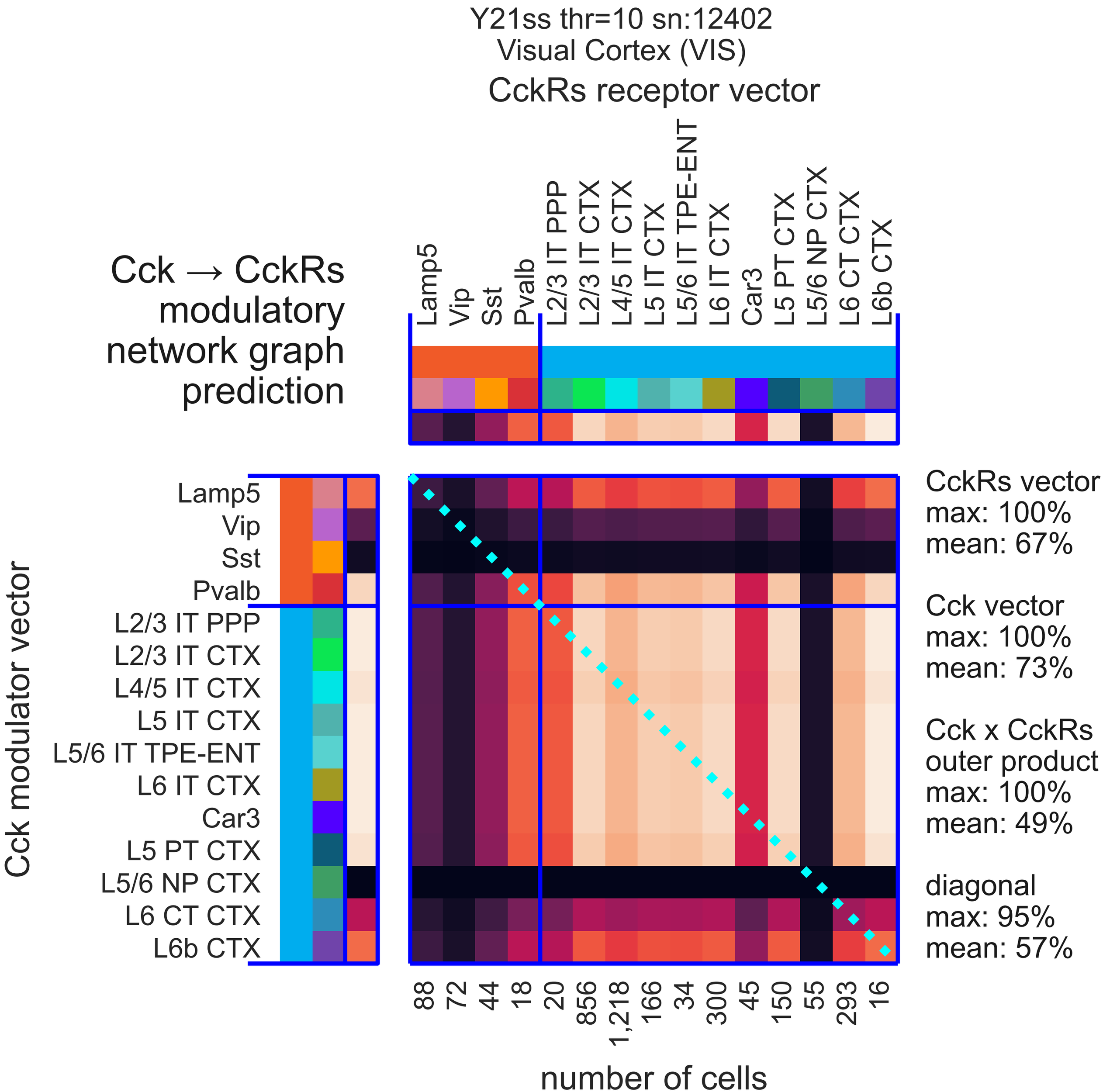
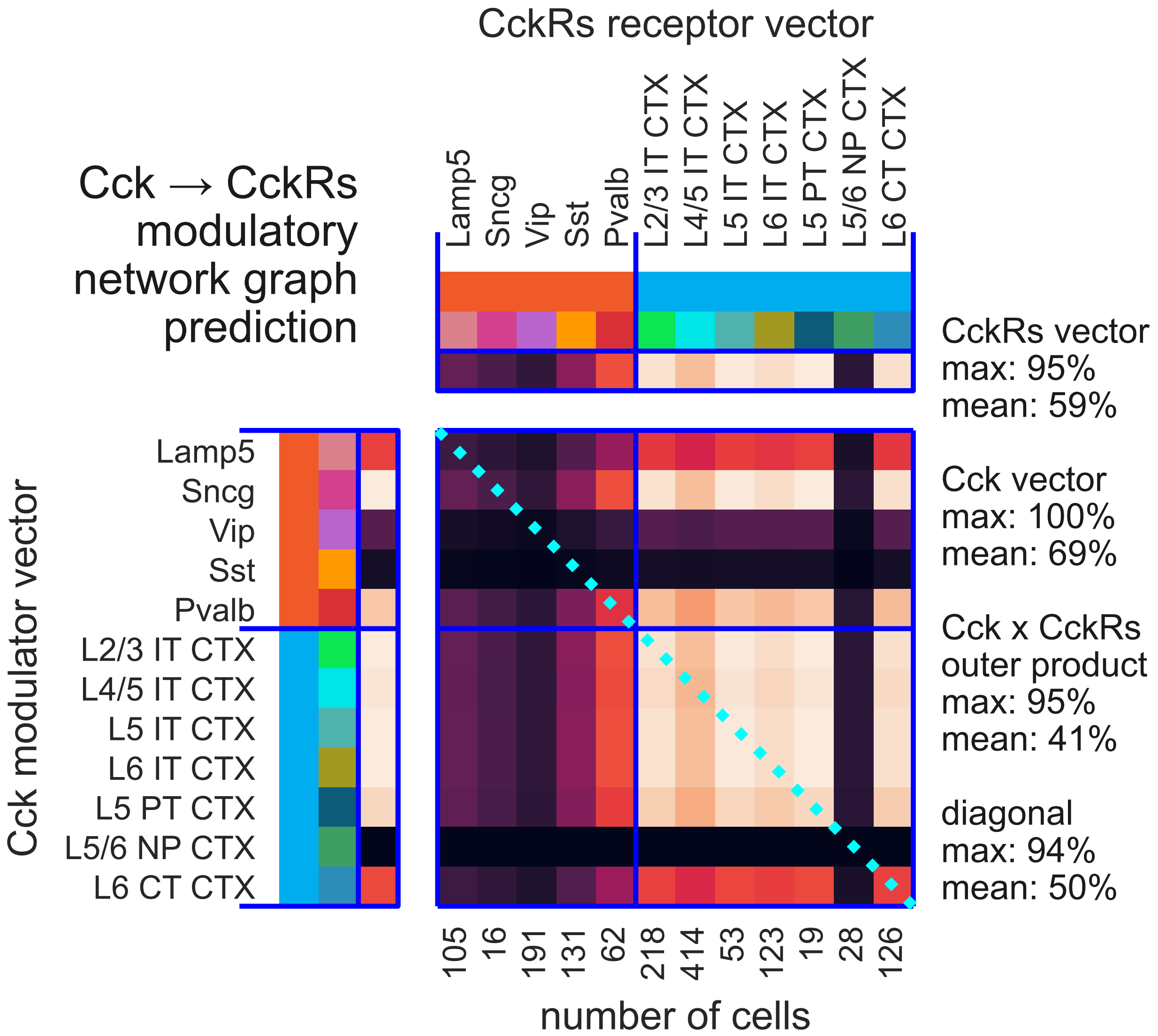
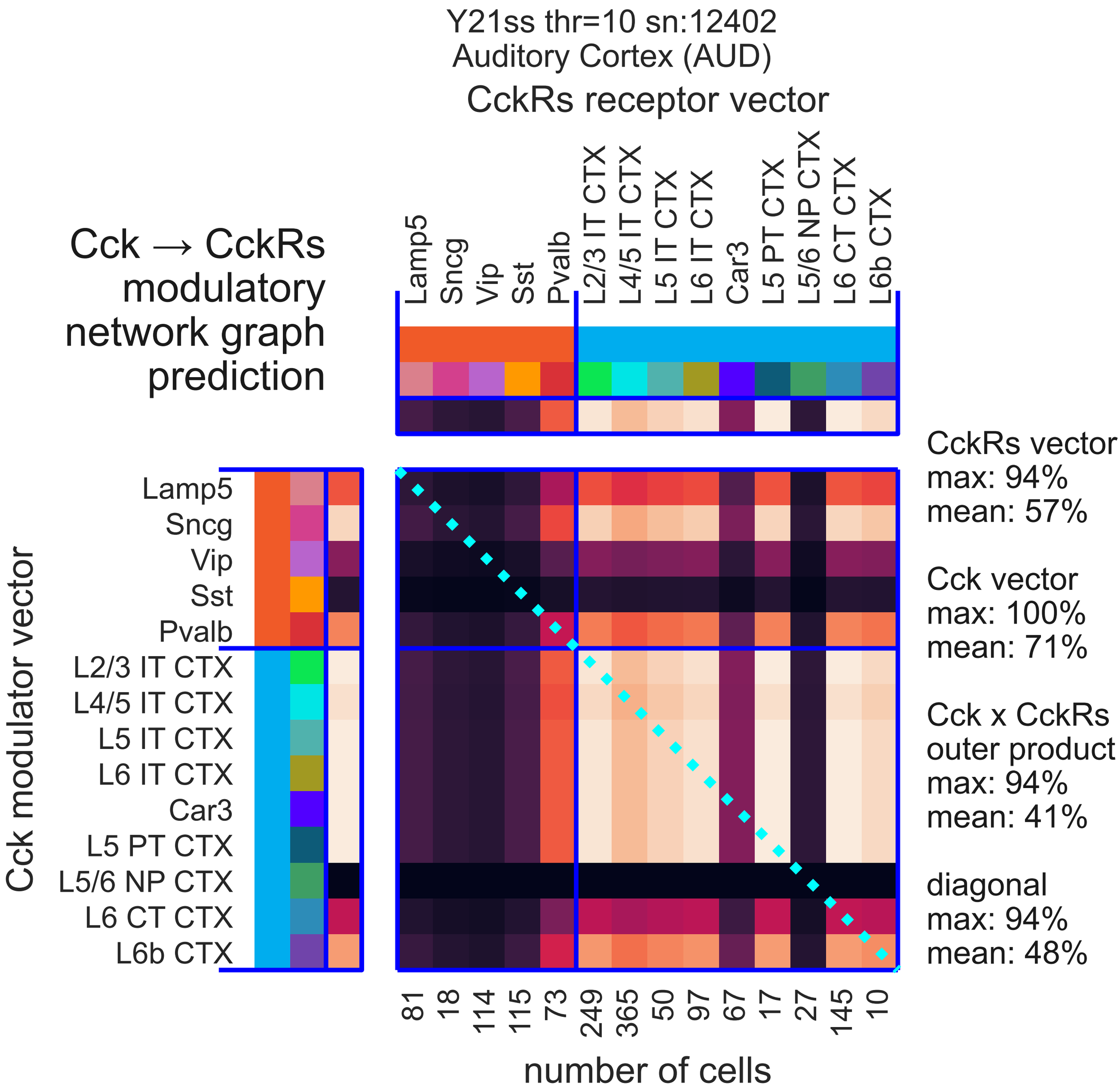

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
CckRs receptor vector
Cck → CckRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Cck modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
CckRs vector
max: 99%
mean: 58%
Cck vector
max: 100%
mean: 63%
Cck x CckRs
outer product
max: 99%
mean: 36%
diagonal
max: 97%
mean: 45%

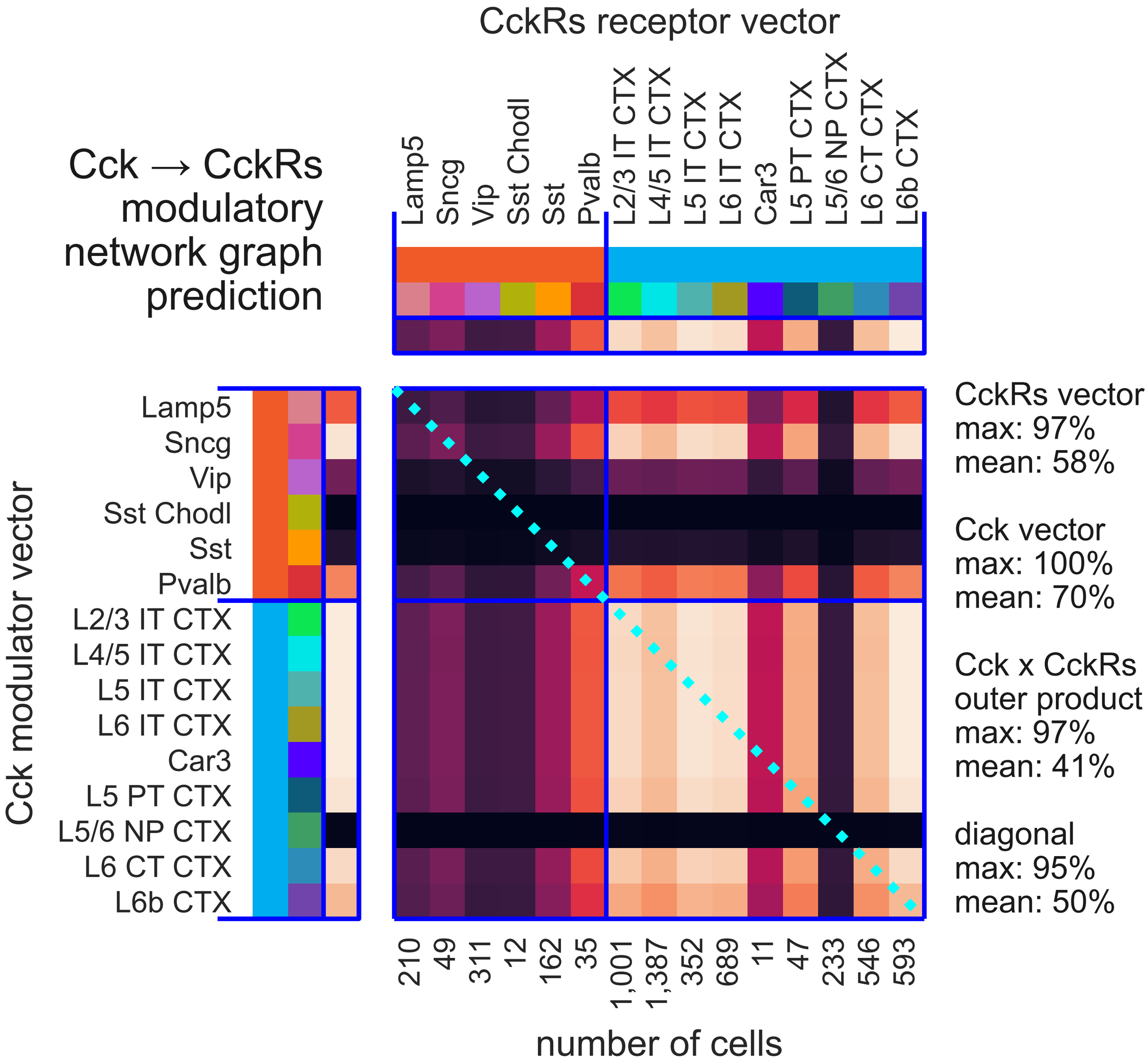

Y21ss thr=10 sn:12402
Visual Cortex (VIS)
CckRs receptor vector
Cck → CckRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Cck modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
CckRs vector
max: 100%
mean: 67%
Cck vector
max: 100%
mean: 73%
Cck x CckRs
outer product
max: 100%
mean: 49%
diagonal
max: 95%
mean: 57%

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)

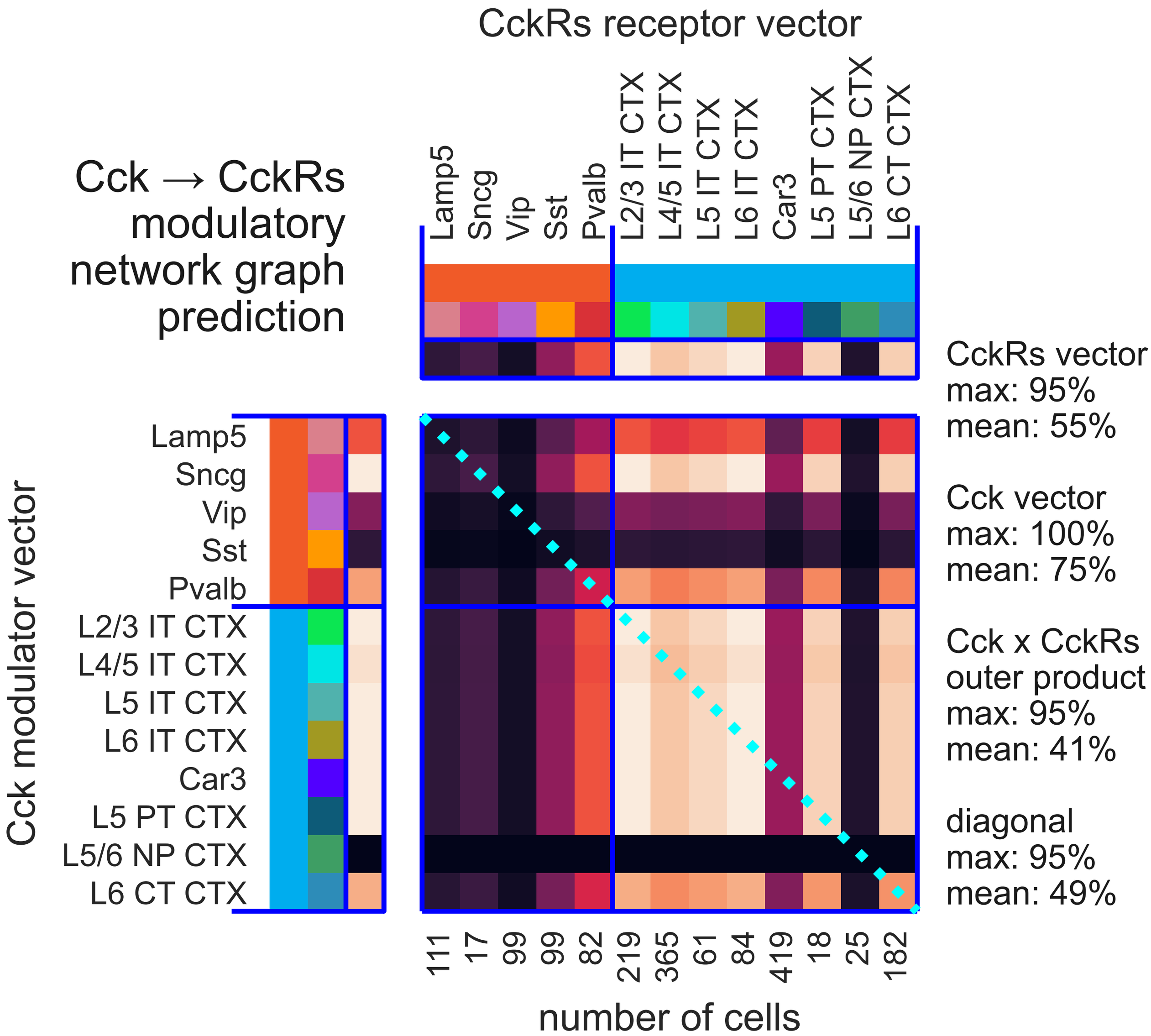


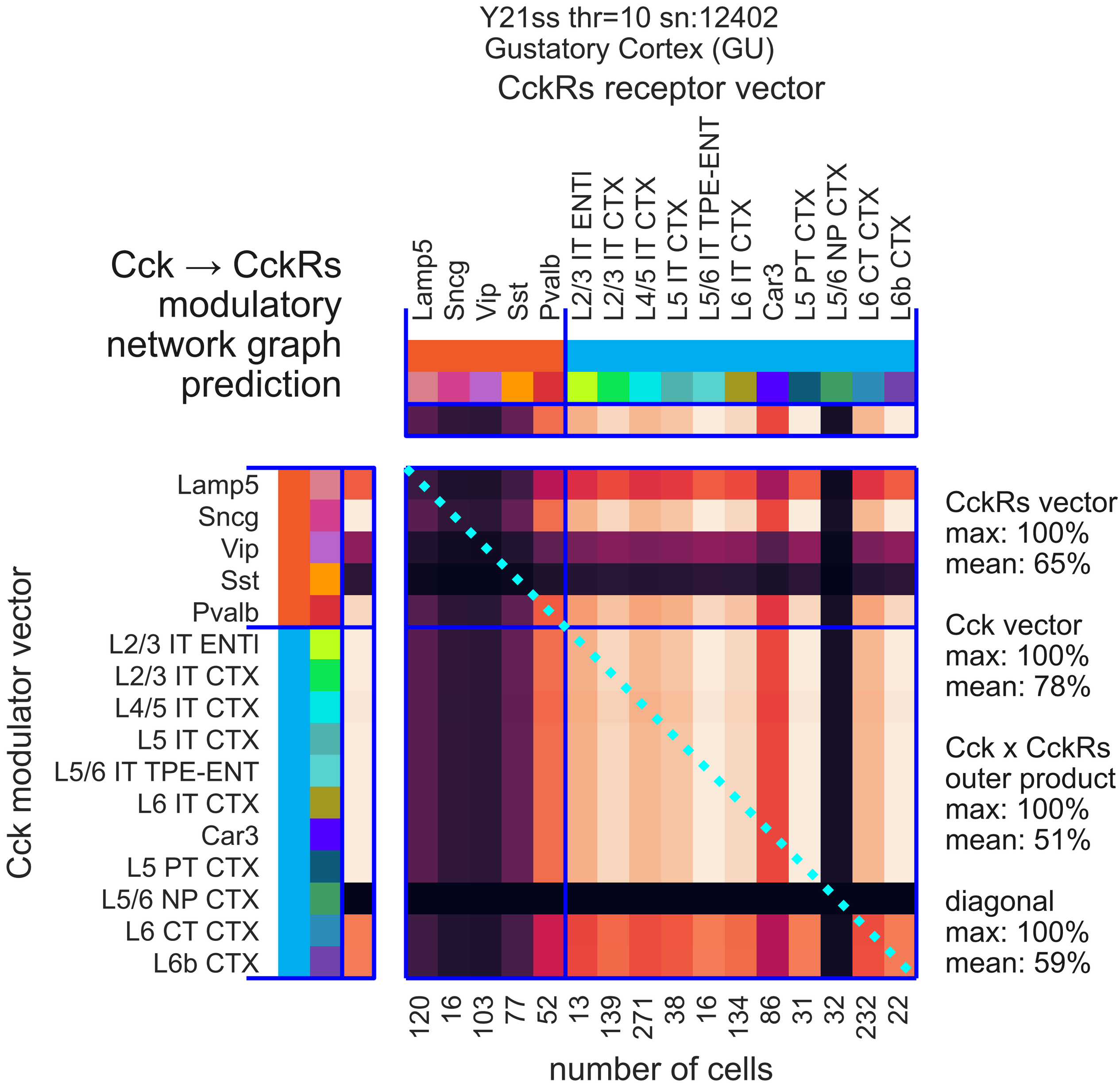

Y21ss thr=10 sn:12402
Auditory Cortex (AUD)
CckRs receptor vector
Cck → CckRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Cck modulator vector
81
18
114
115
73
249
365
50
97
67
17
27
145
10
number of cells
CckRs vector
max: 94%
mean: 57%
Cck vector
max: 100%
mean: 71%
Cck x CckRs
outer product
max: 94%
mean: 41%
diagonal
max: 94%
mean: 48%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

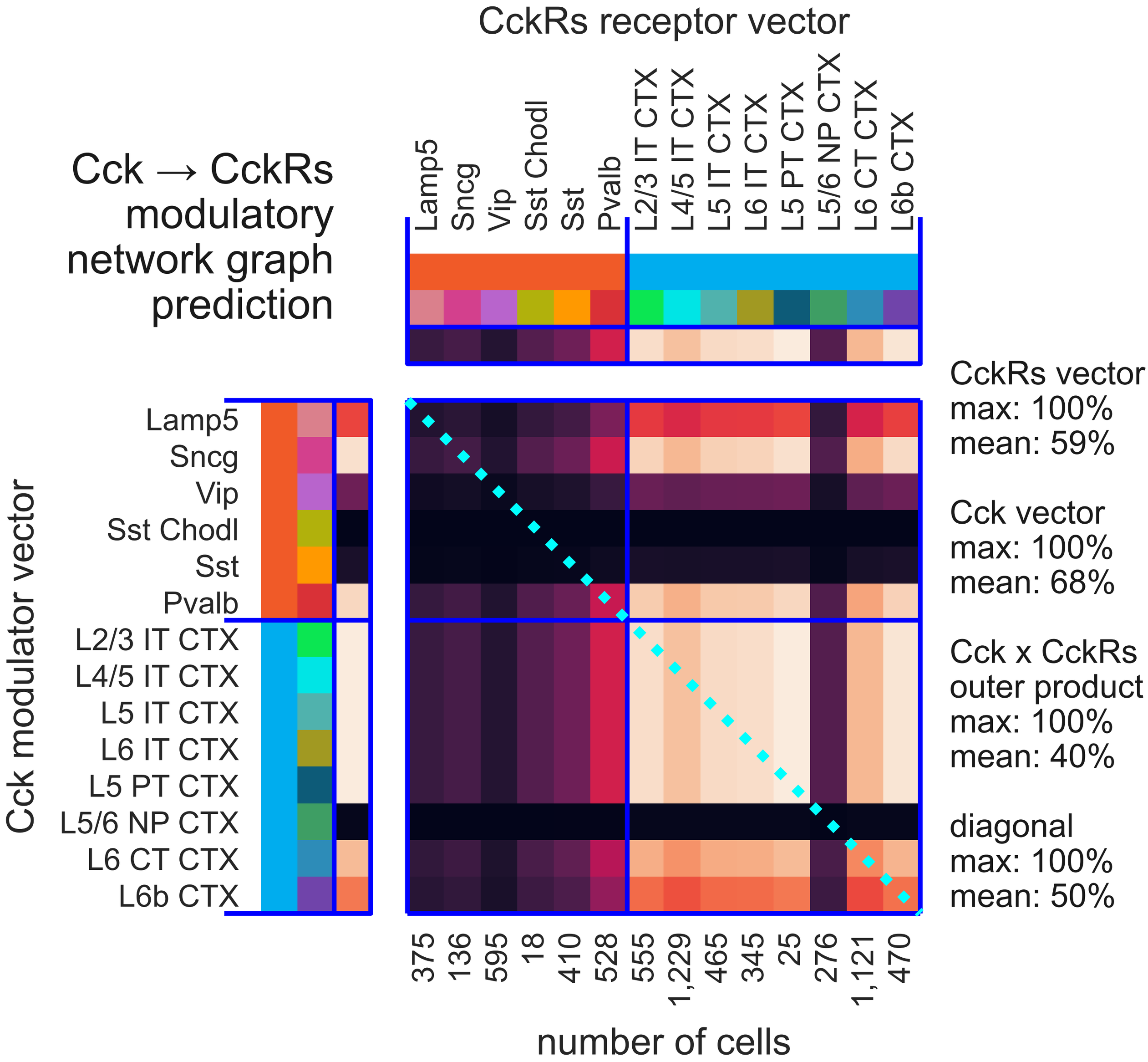


Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)

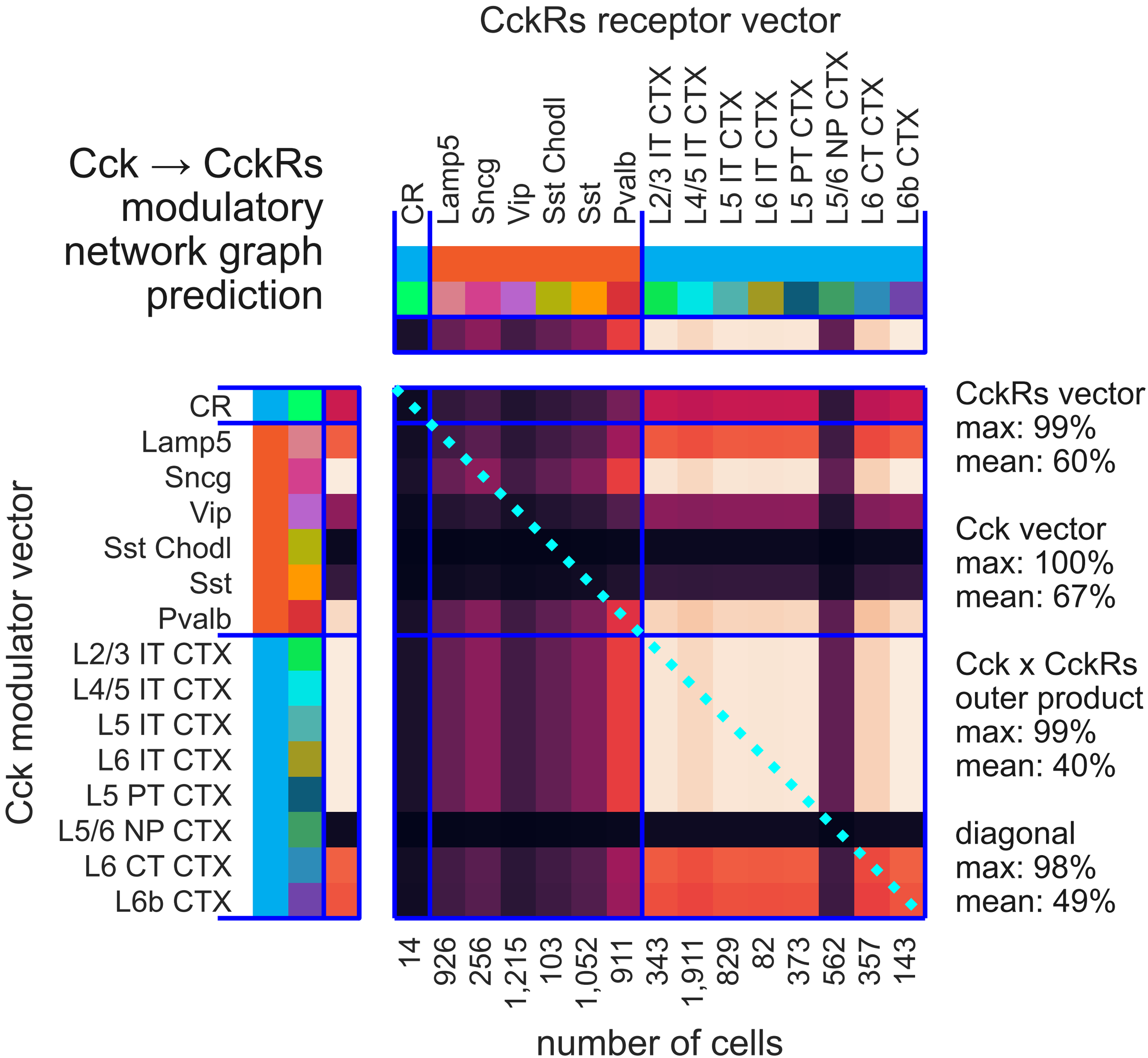


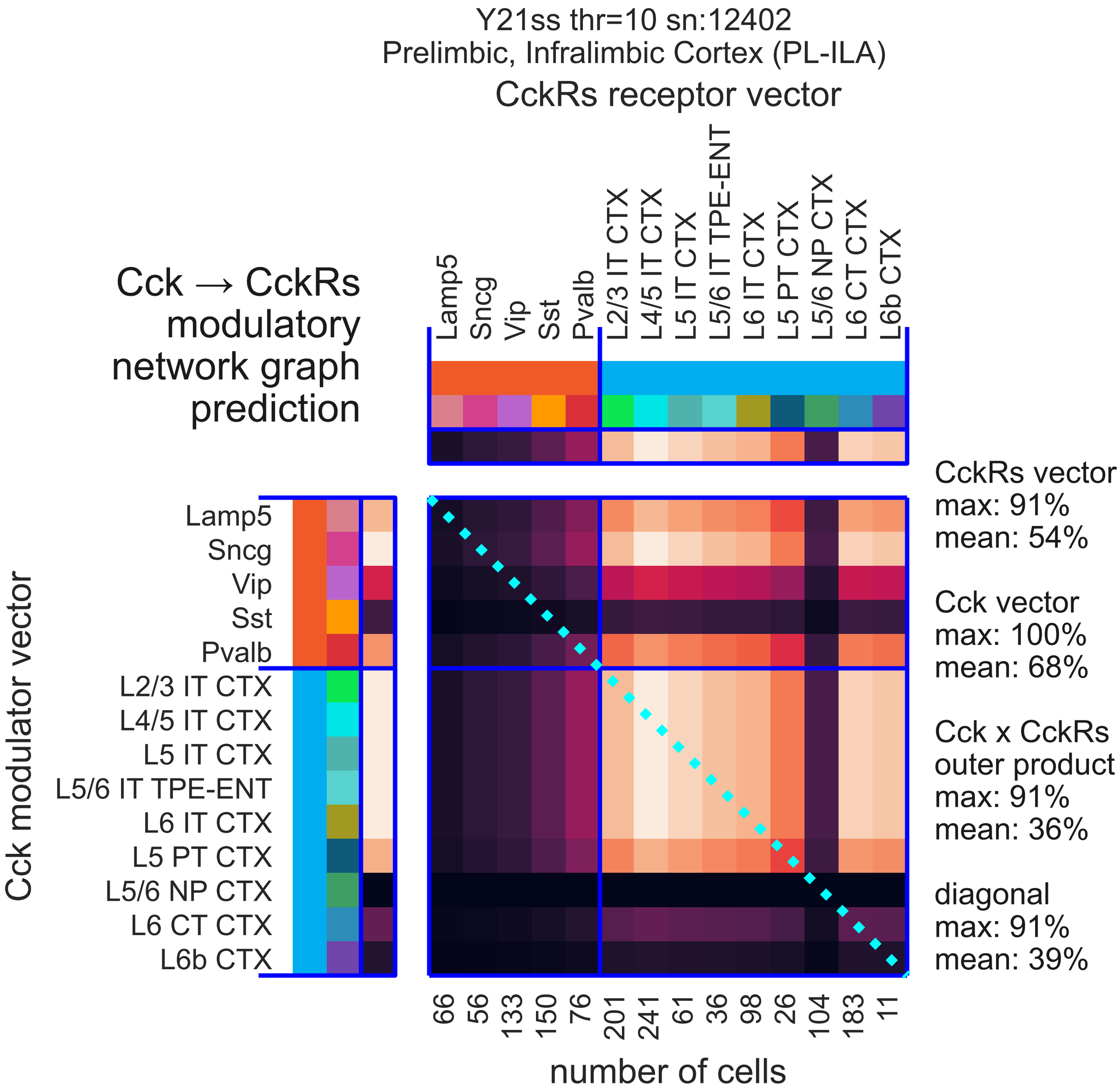

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
CckRs receptor vector
Cck → CckRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTl
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Cck modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
CckRs vector
max: 100%
mean: 65%
Cck vector
max: 100%
mean: 78%
Cck x CckRs
outer product
max: 100%
mean: 51%
diagonal
max: 100%
mean: 59%

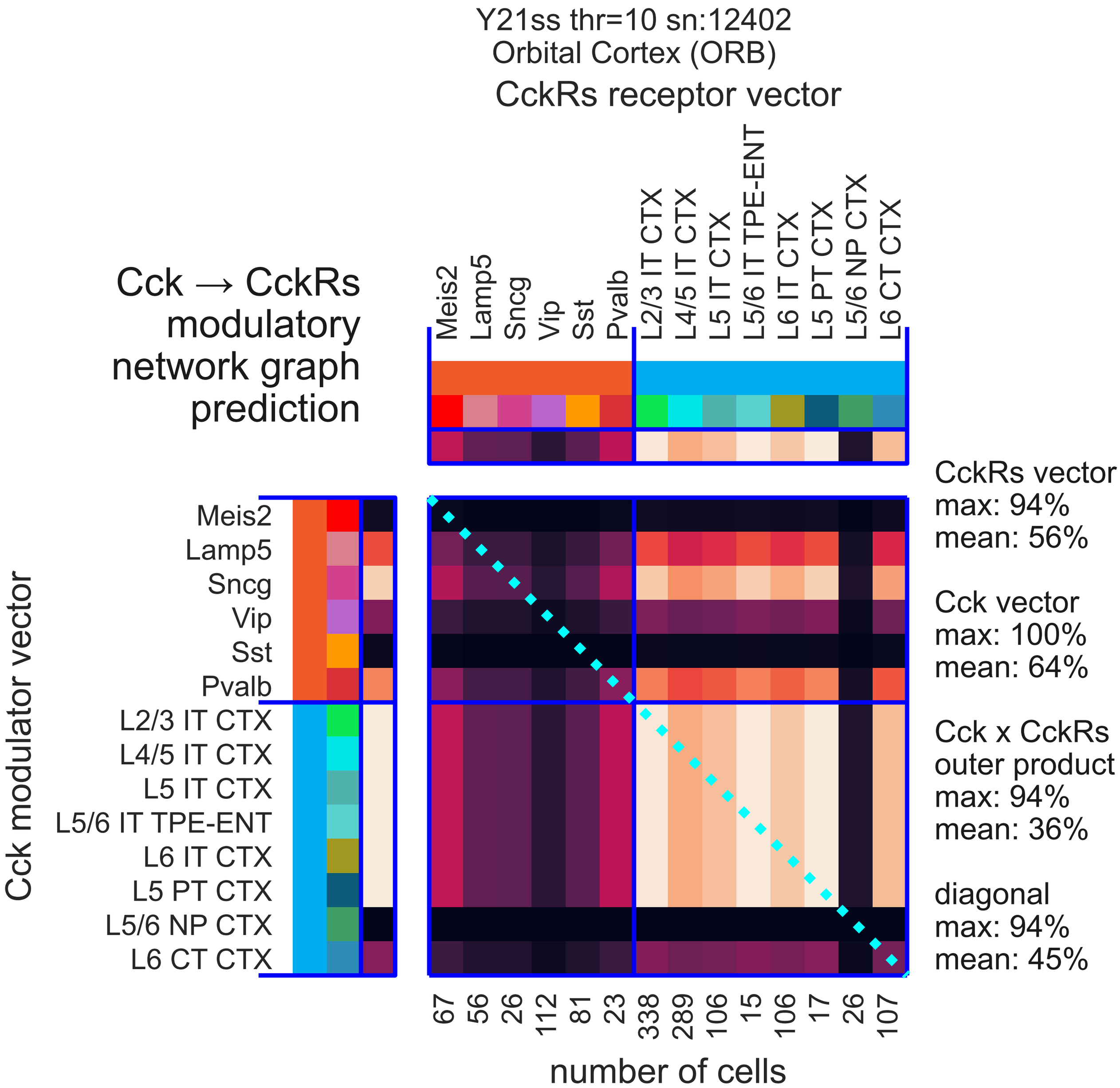
Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



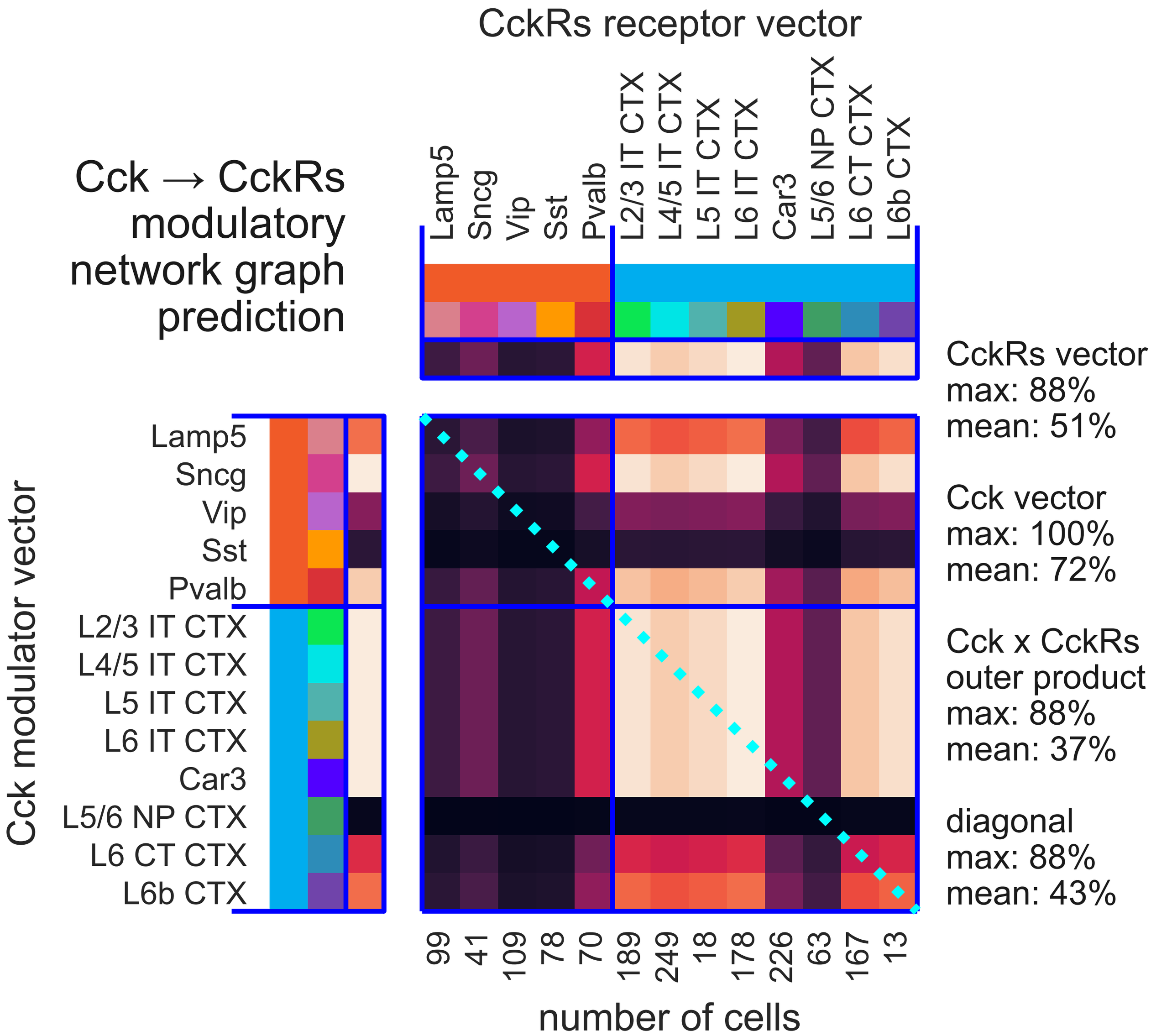
Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



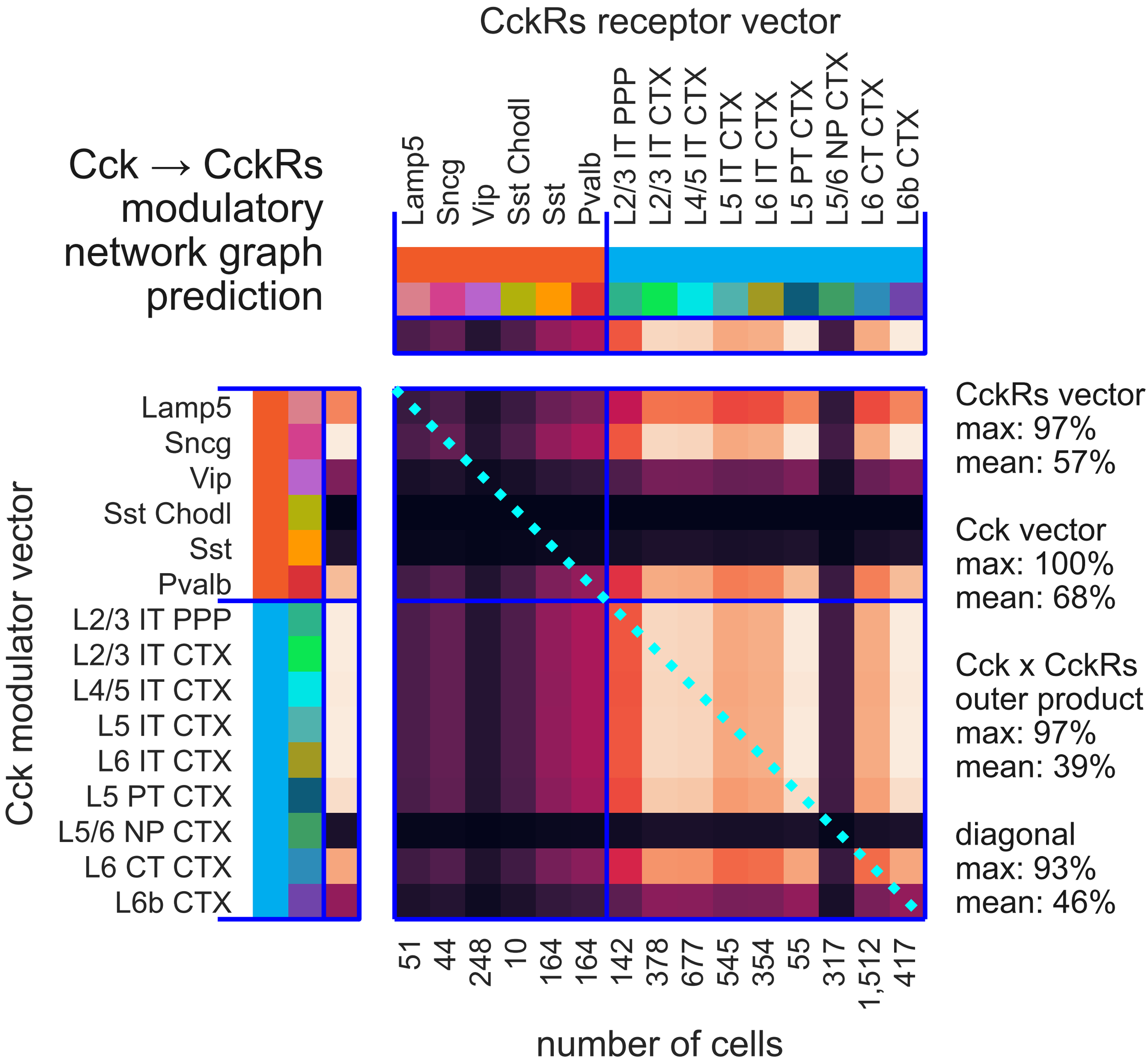

Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)
CckRs receptor vector
Cck → CckRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Cck modulator vector
66
56
133
150
76
201
241
61
36
98
26
104
183
11
number of cells
CckRs vector
max: 91%
mean: 54%
Cck vector
max: 100%
mean: 68%
Cck x CckRs
outer product
max: 91%
mean: 36%
diagonal
max: 91%
mean: 39%

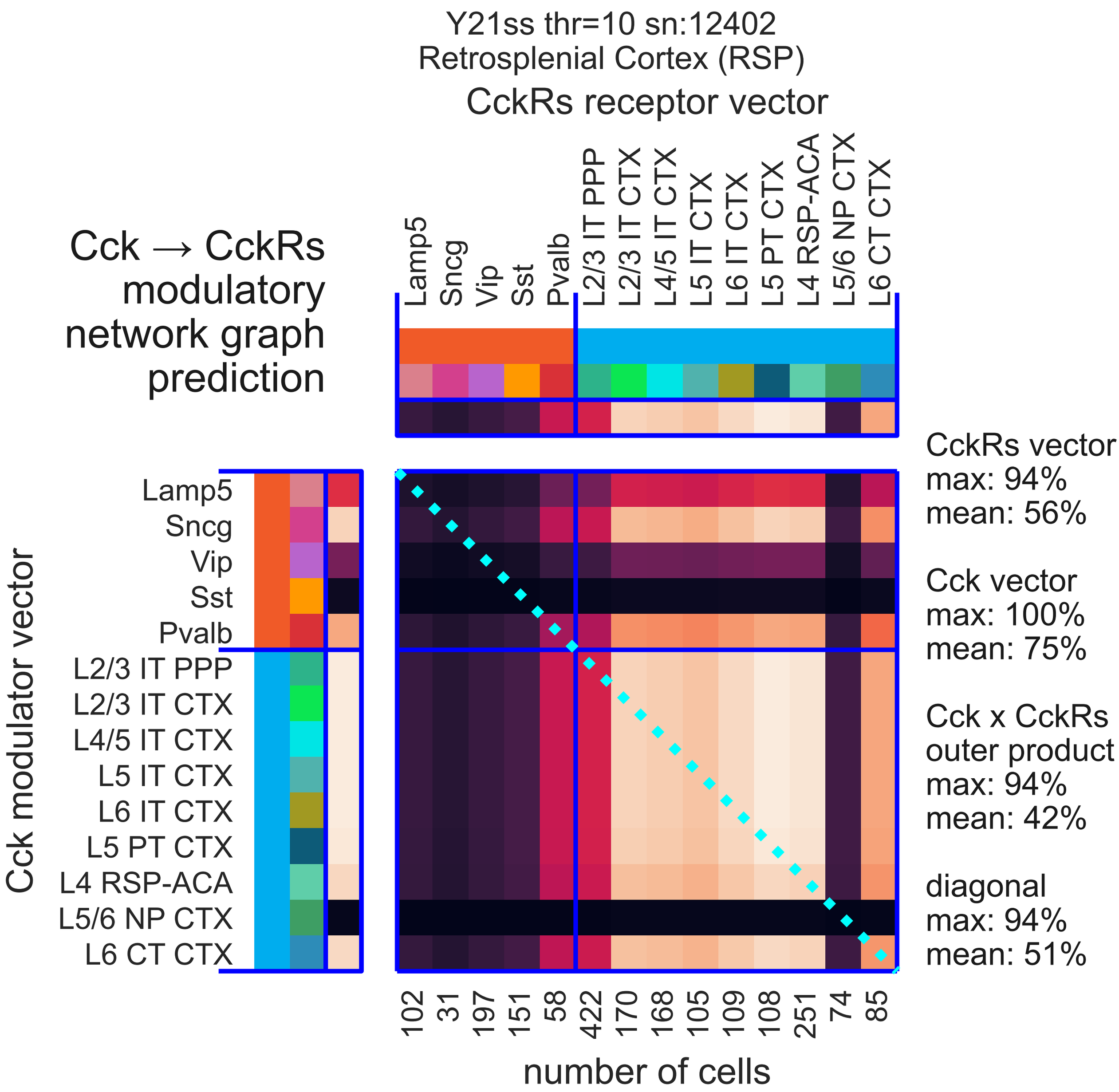

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
CckRs receptor vector
Cck → CckRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Cck modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
CckRs vector
max: 94%
mean: 56%
Cck vector
max: 100%
mean: 64%
Cck x CckRs
outer product
max: 94%
mean: 36%
diagonal
max: 94%
mean: 45%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

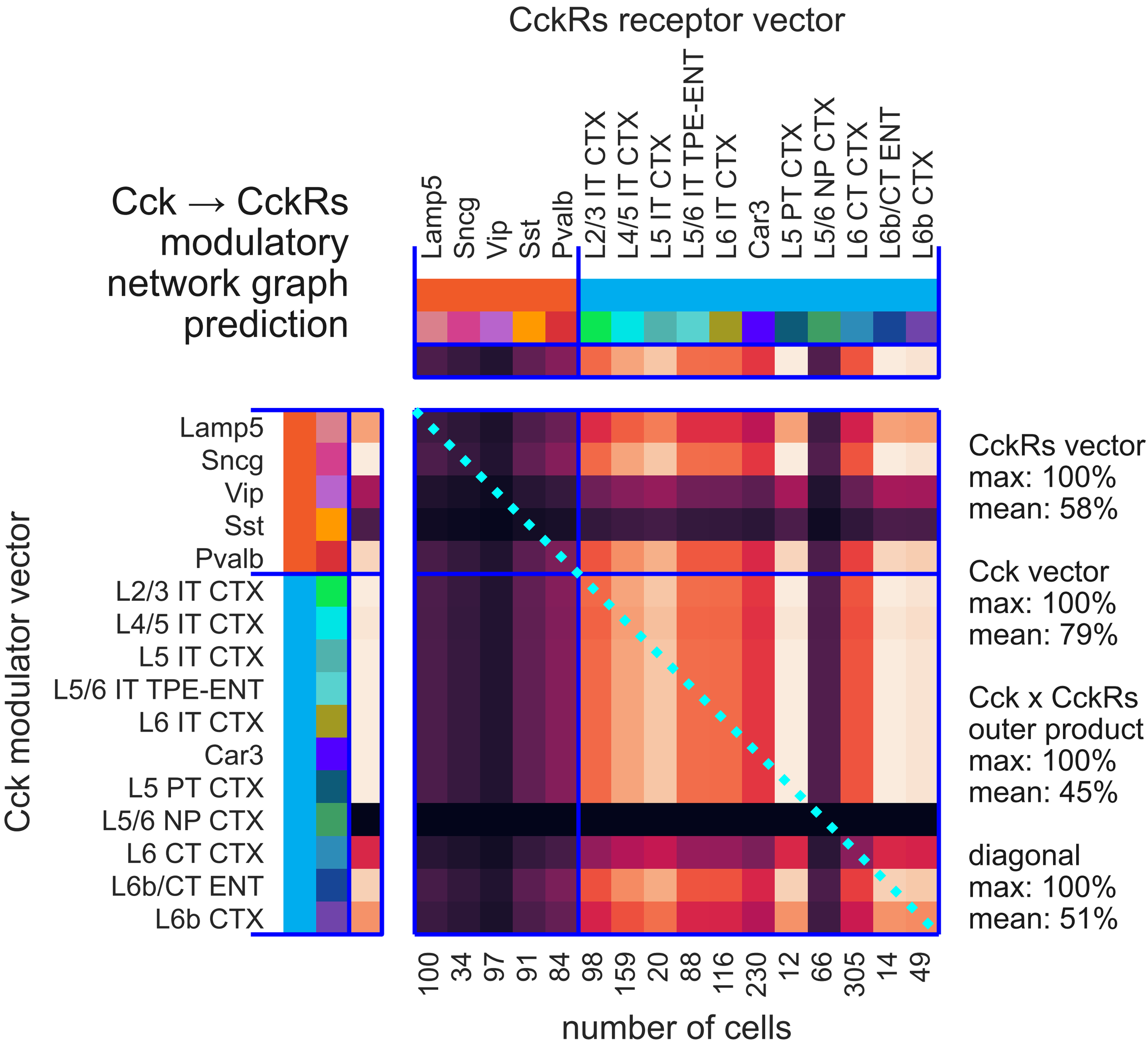


Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

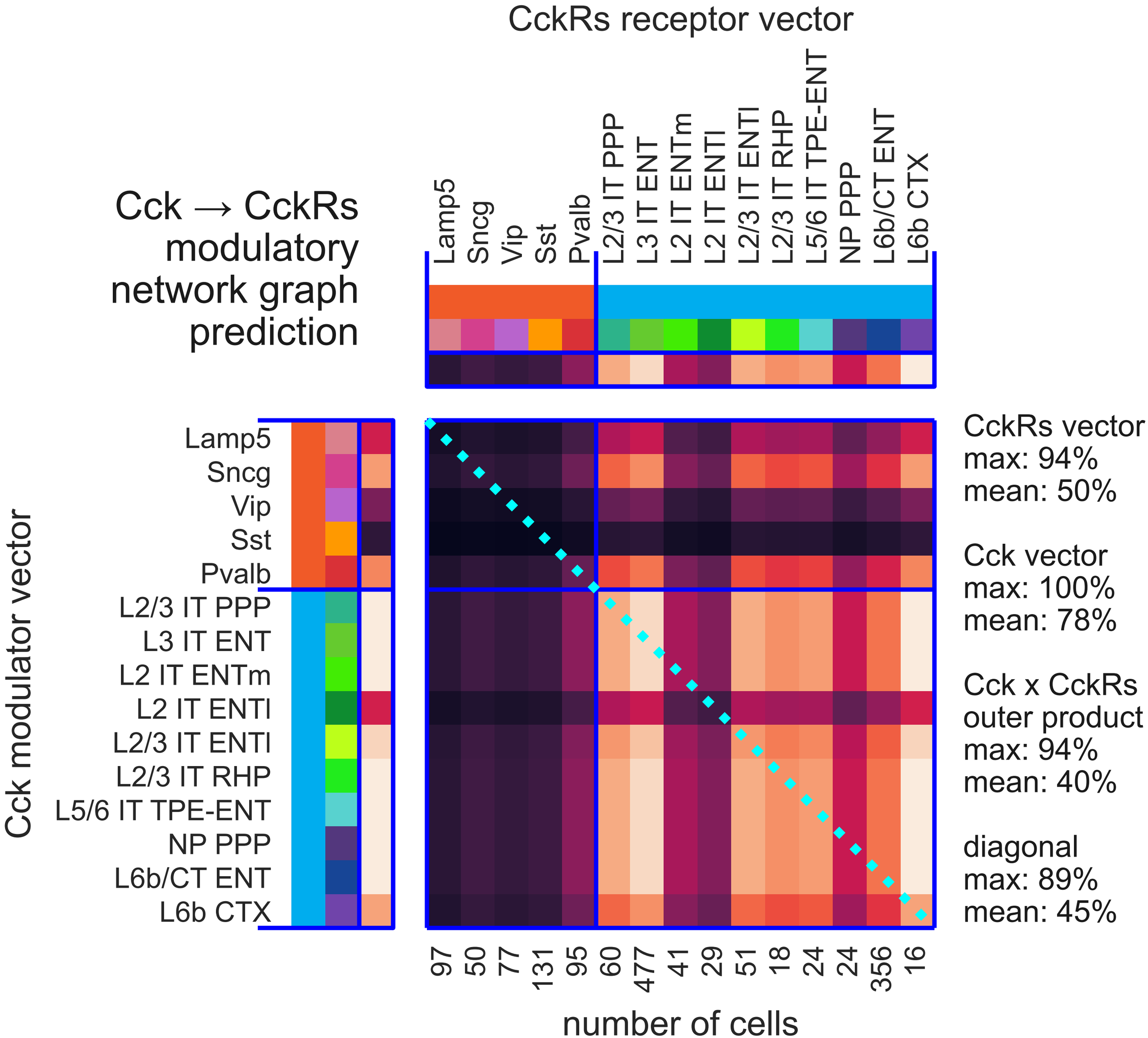


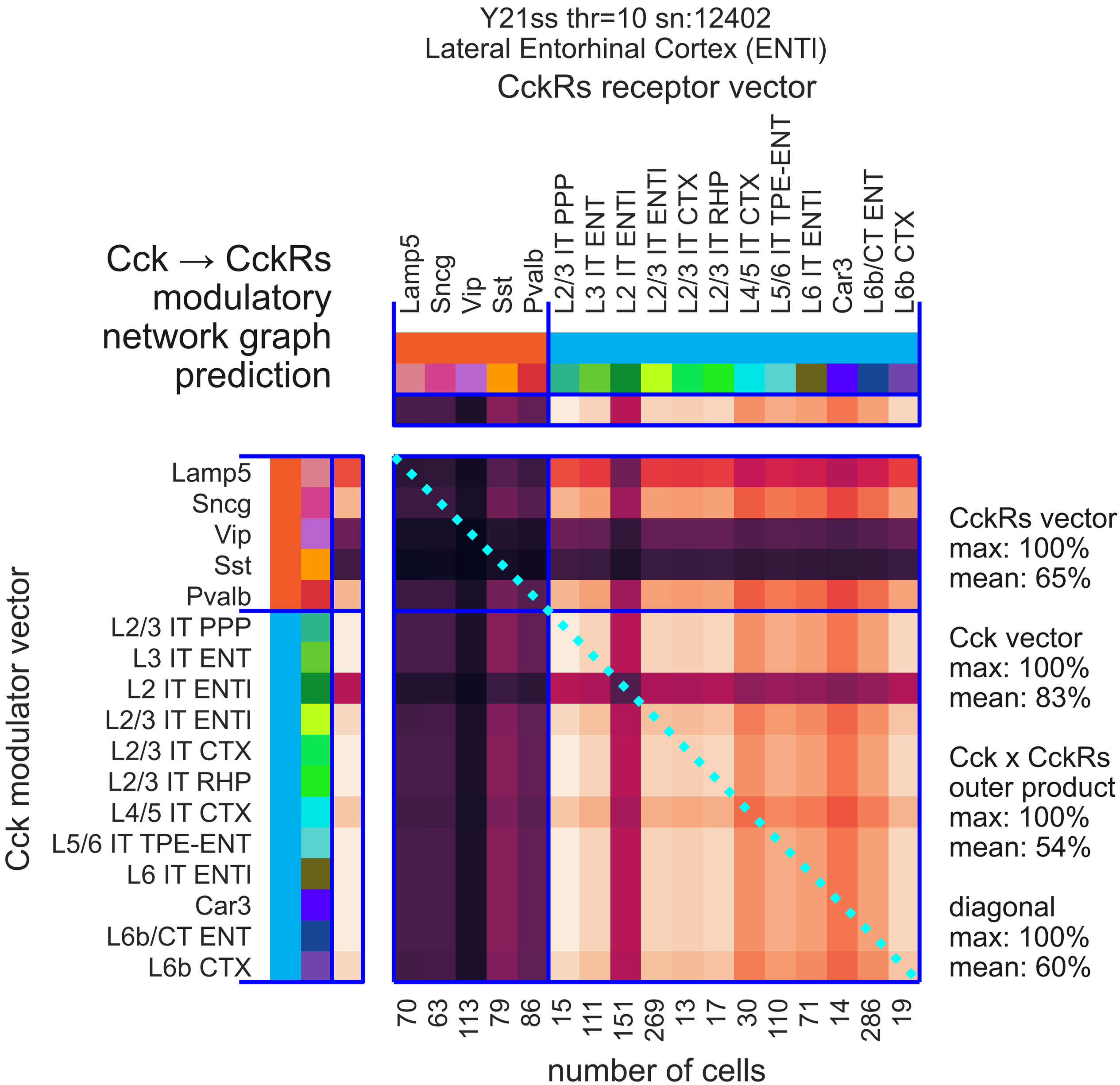

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
CckRs receptor vector
Cck → CckRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Cck modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
CckRs vector
max: 94%
mean: 56%
Cck vector
max: 100%
mean: 75%
Cck x CckRs
outer product
max: 94%
mean: 42%
diagonal
max: 94%
mean: 51%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

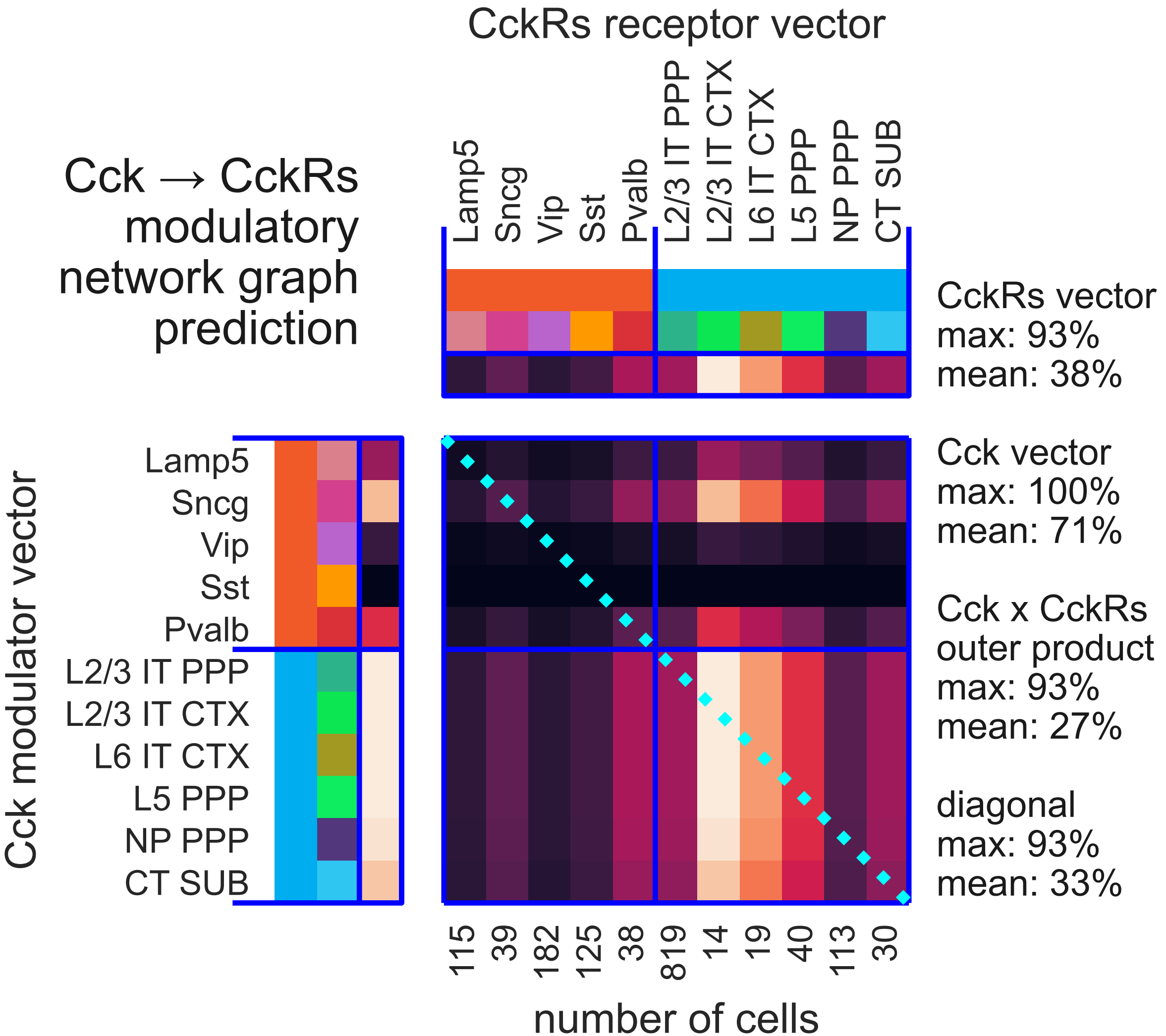


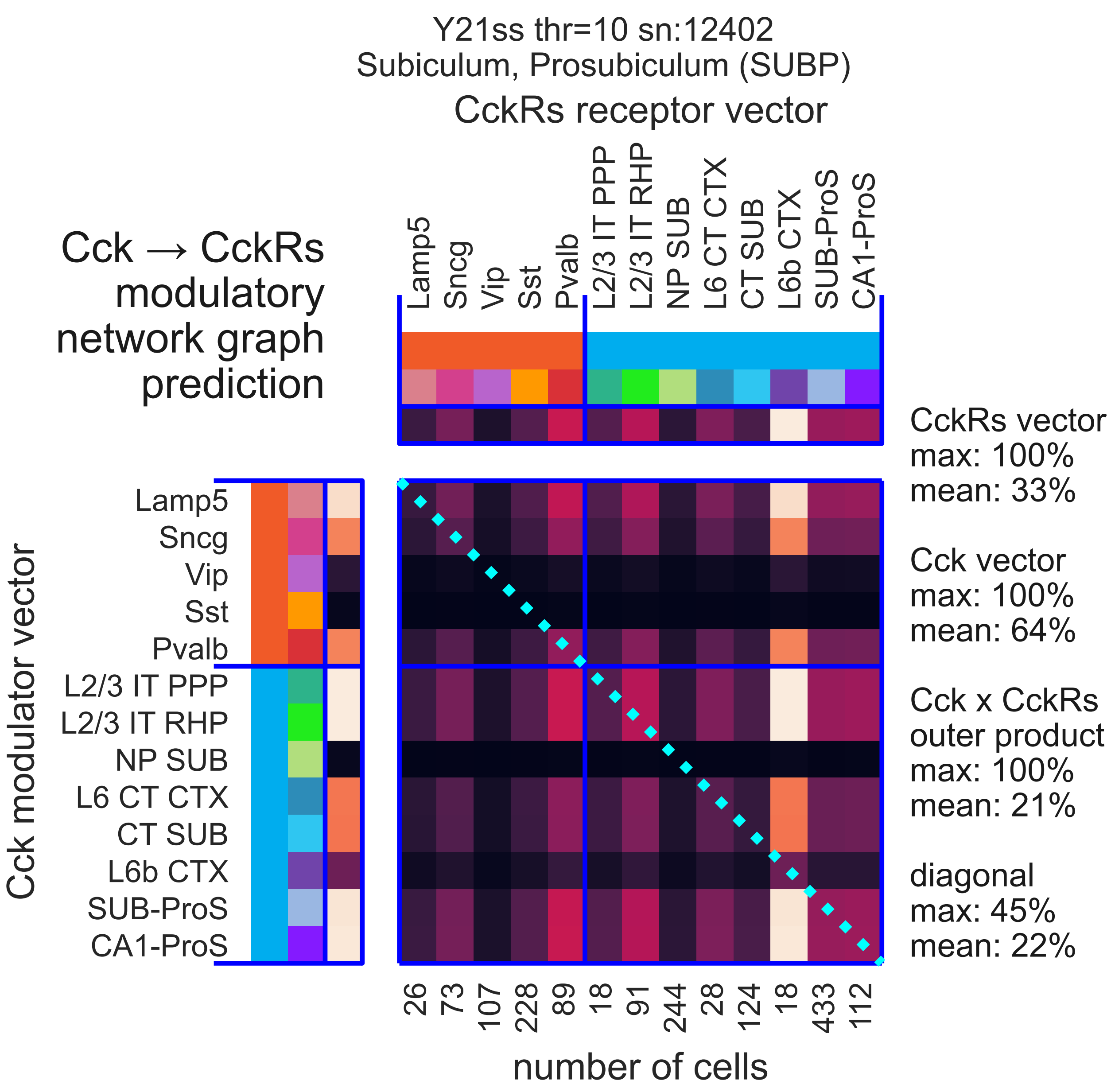
Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)



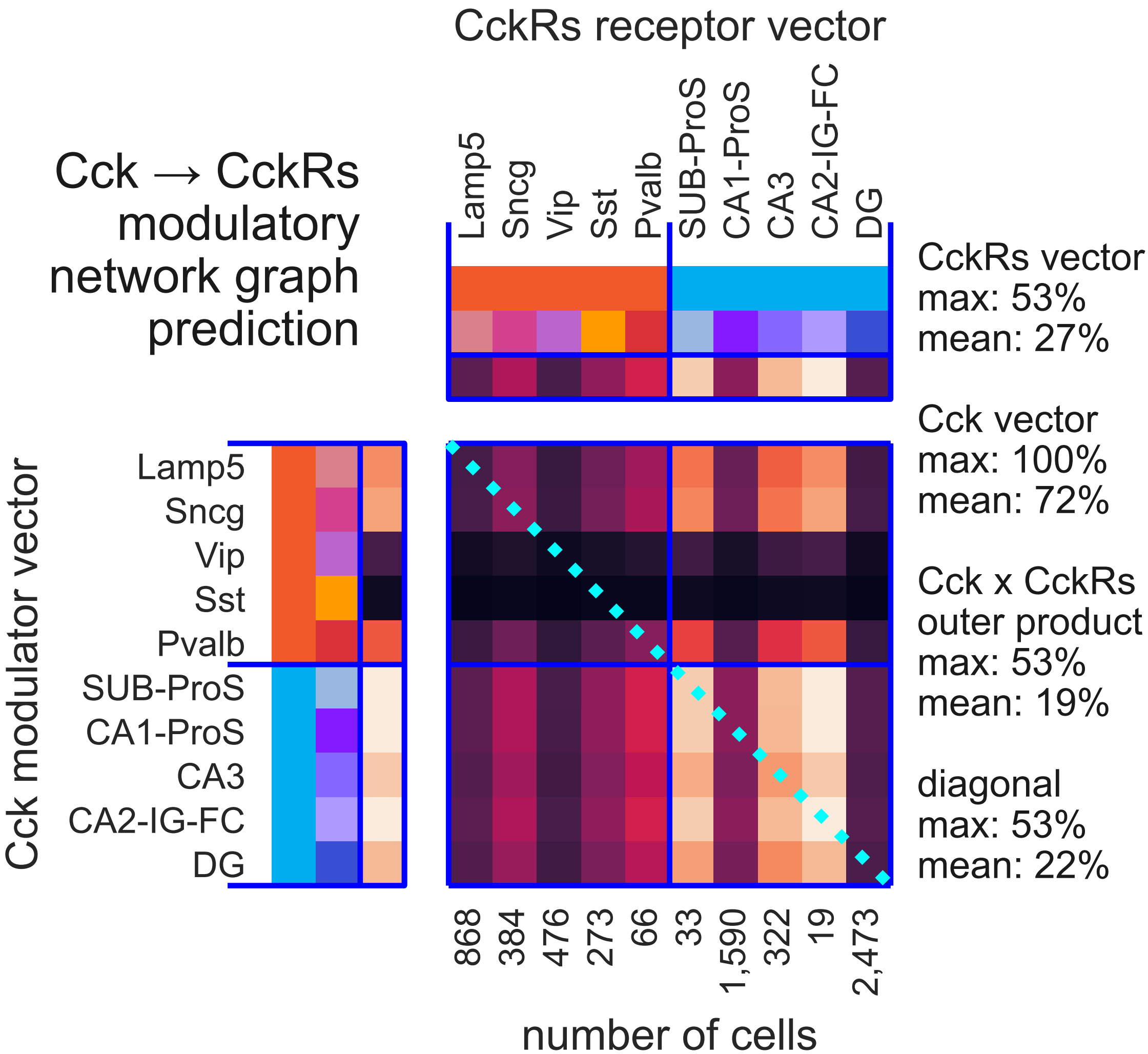

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
CckRs receptor vector
Cck → CckRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Cck modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
CckRs vector
max: 100%
mean: 65%
Cck vector
max: 100%
mean: 83%
Cck x CckRs
outer product
max: 100%
mean: 54%
diagonal
max: 100%
mean: 60%

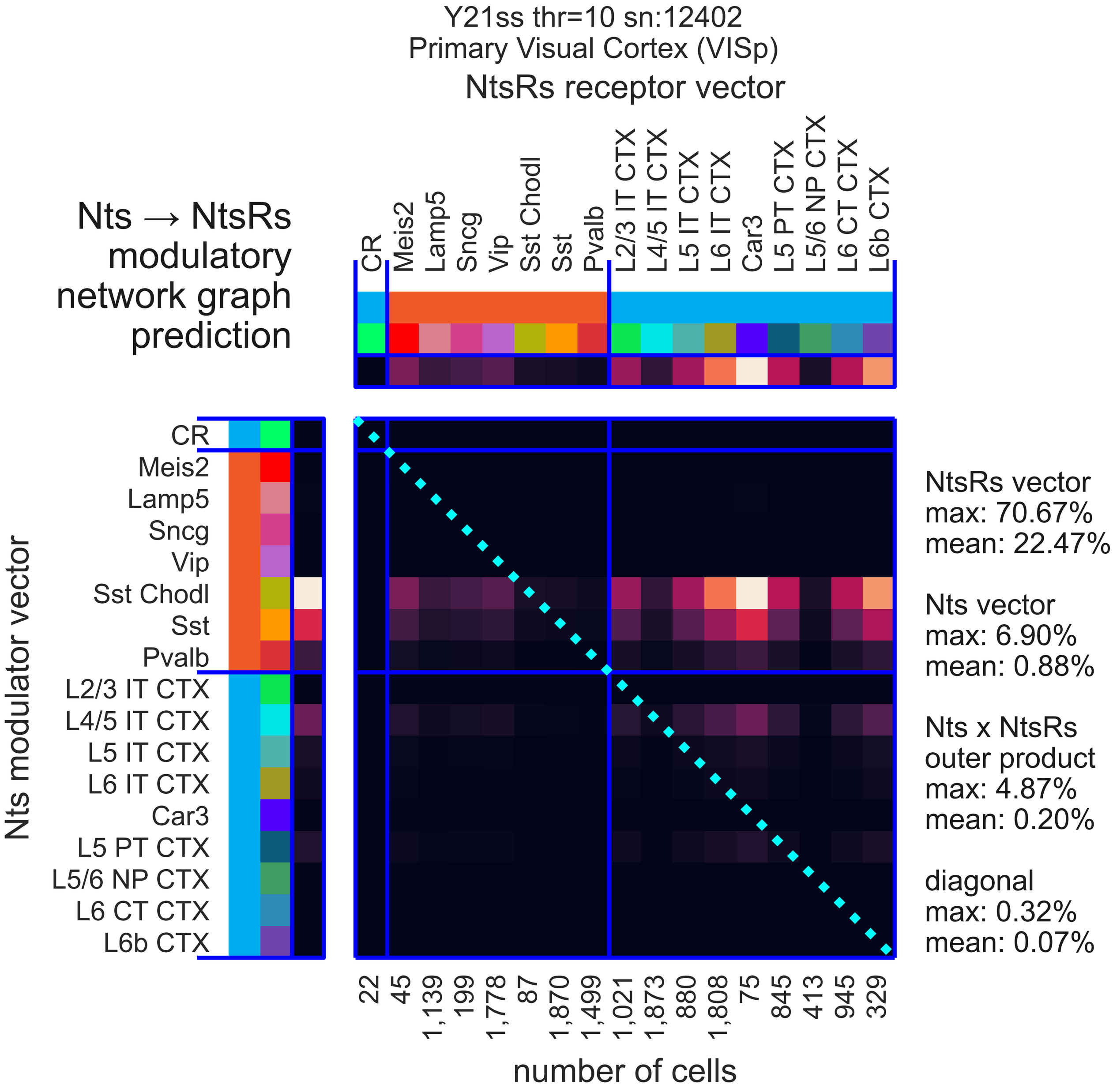
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

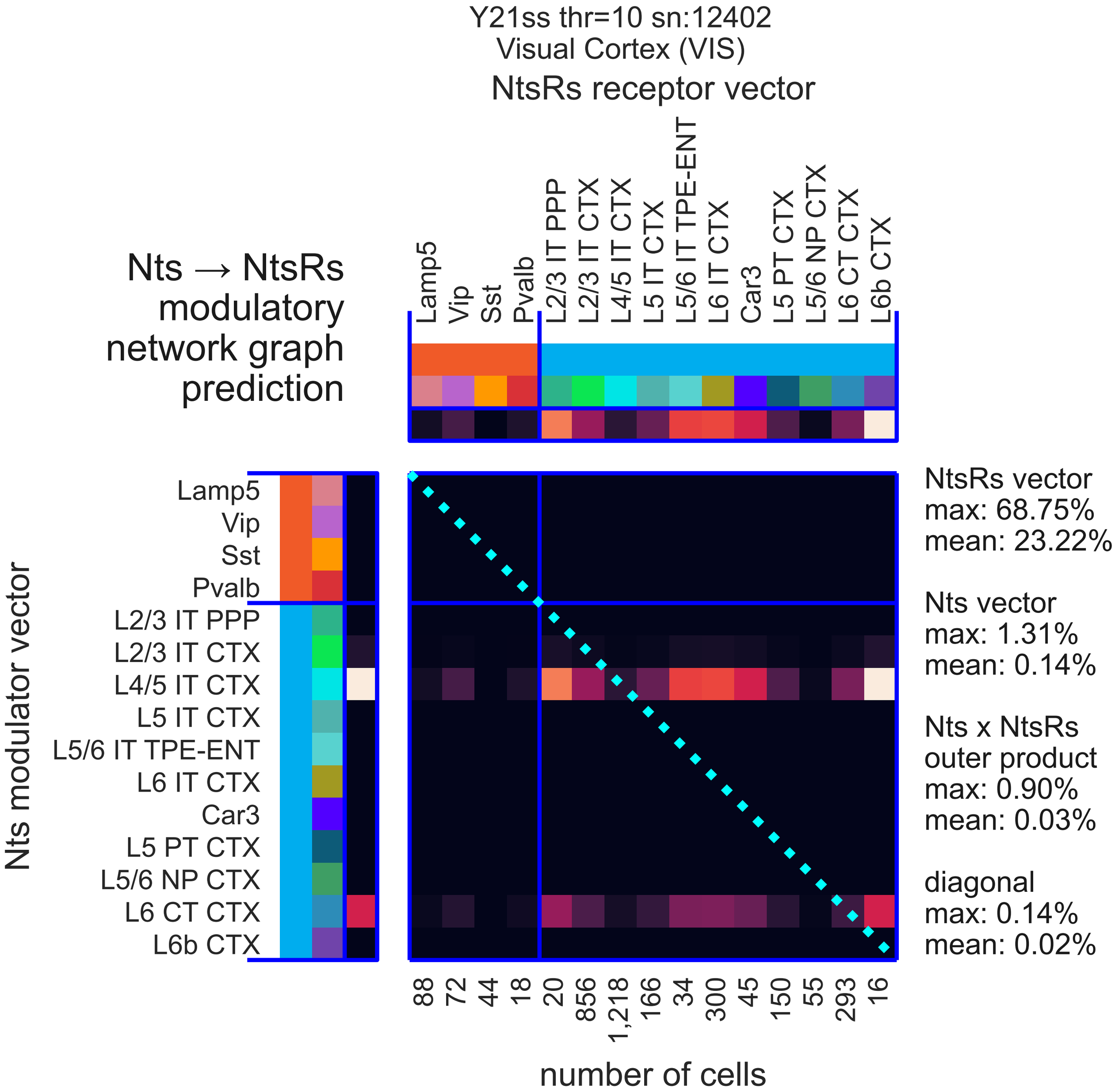



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)
CckRs receptor vector
Cck → CckRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT RHP
NP SUB
L6 CT CTX
CT SUB
L6b CTX
SUB-ProS
CA1-ProS
CckRs vector
max: 100%
mean: 33%
Cck vector
max: 100%
mean: 64%
Cck x CckRs
outer product
max: 100%
mean: 21%
diagonal
max: 45%
mean: 22%
Cck modulator vector
26
73
107
228
89
18
91
244
28
124
18
433
112
number of cells

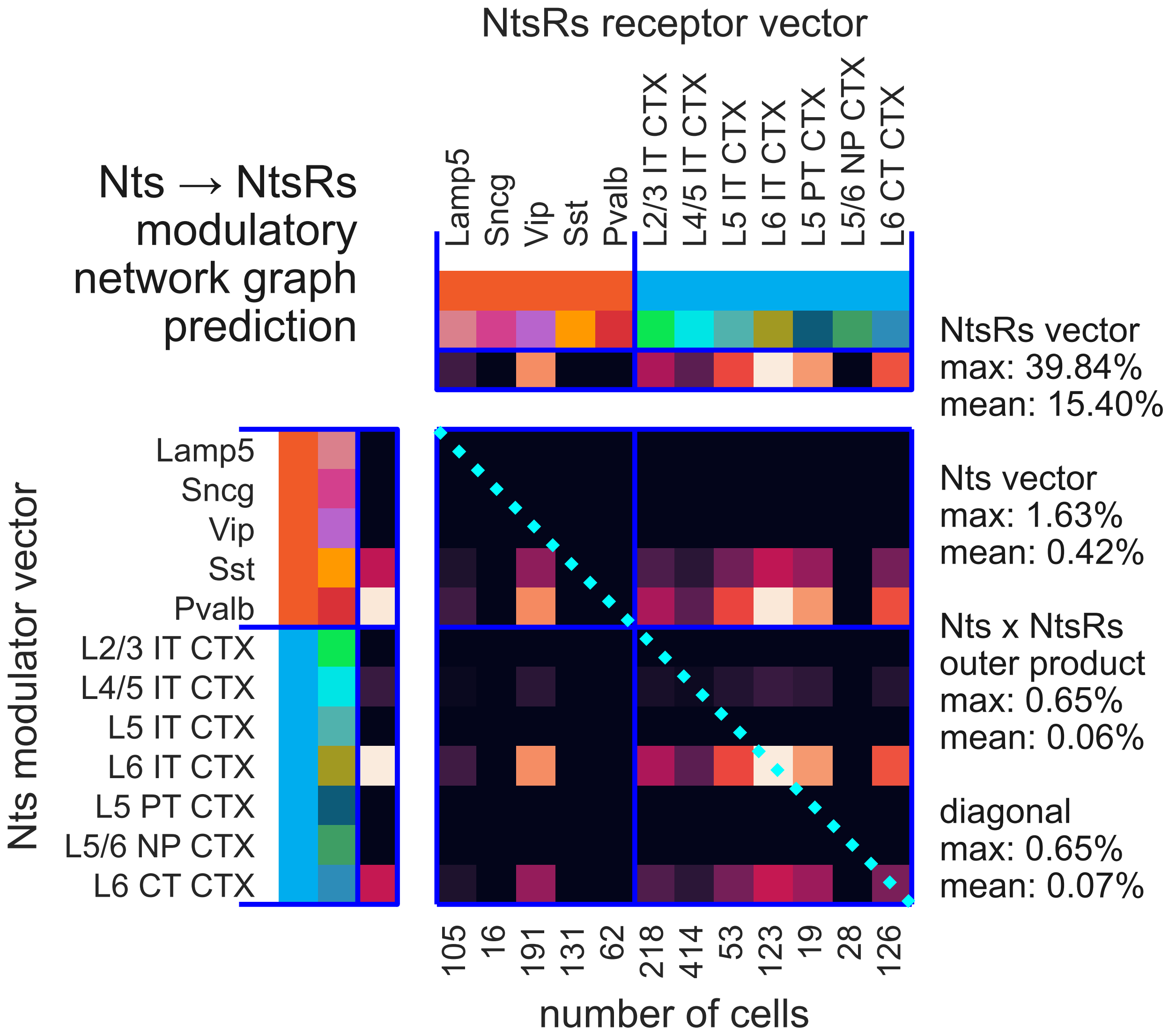
Y21ss thr=10 sn:12402
Hippocampus (HIP)

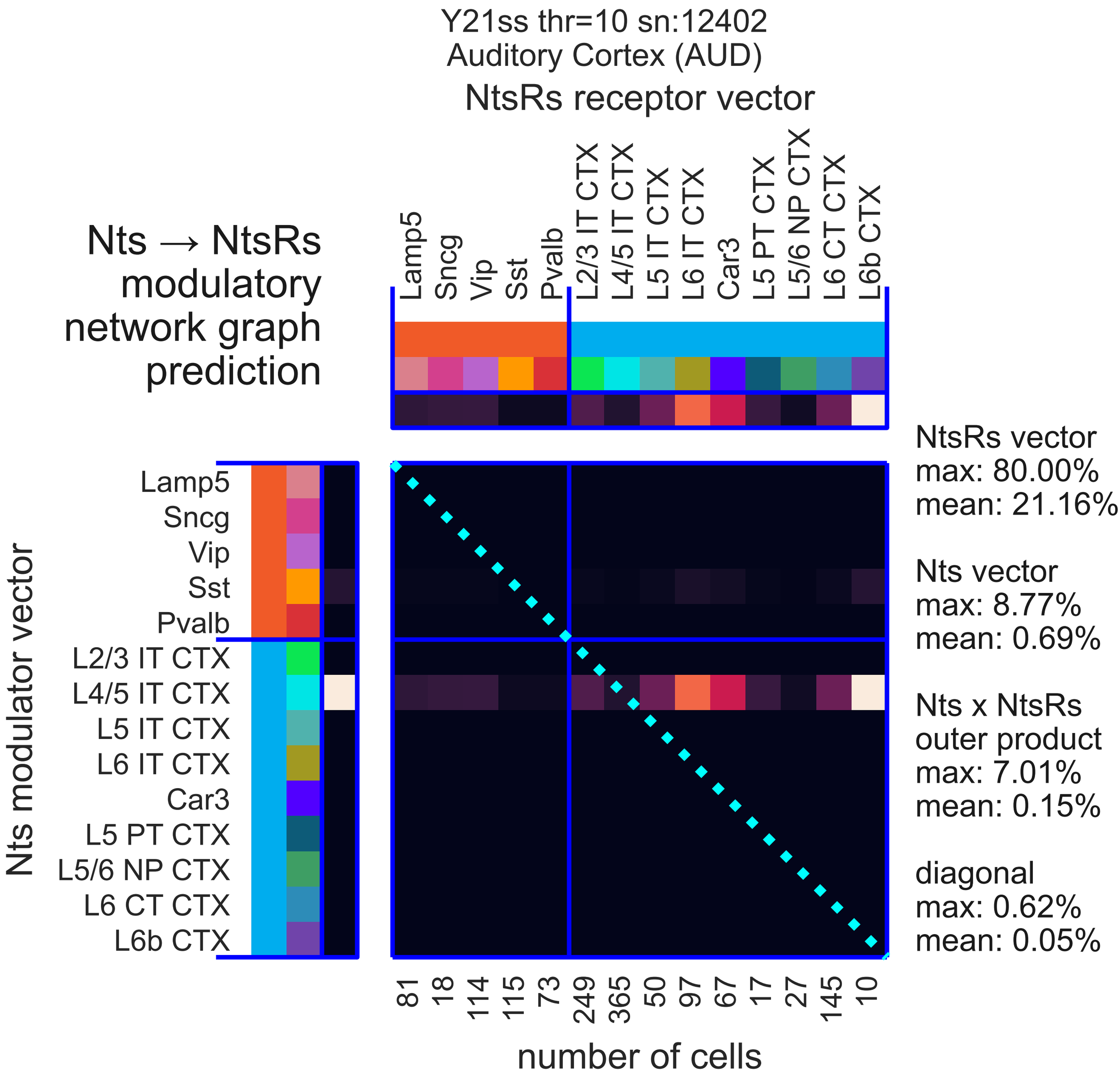



Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
NtsRs receptor vector
Nts → NtsRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Nts modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
NtsRs vector
max: 70.67%
mean: 22.47%
Nts vector
max: 6.90%
mean: 0.88%
Nts x NtsRs
outer product
max: 4.87%
mean: 0.20%
diagonal
max: 0.32%
mean: 0.07%

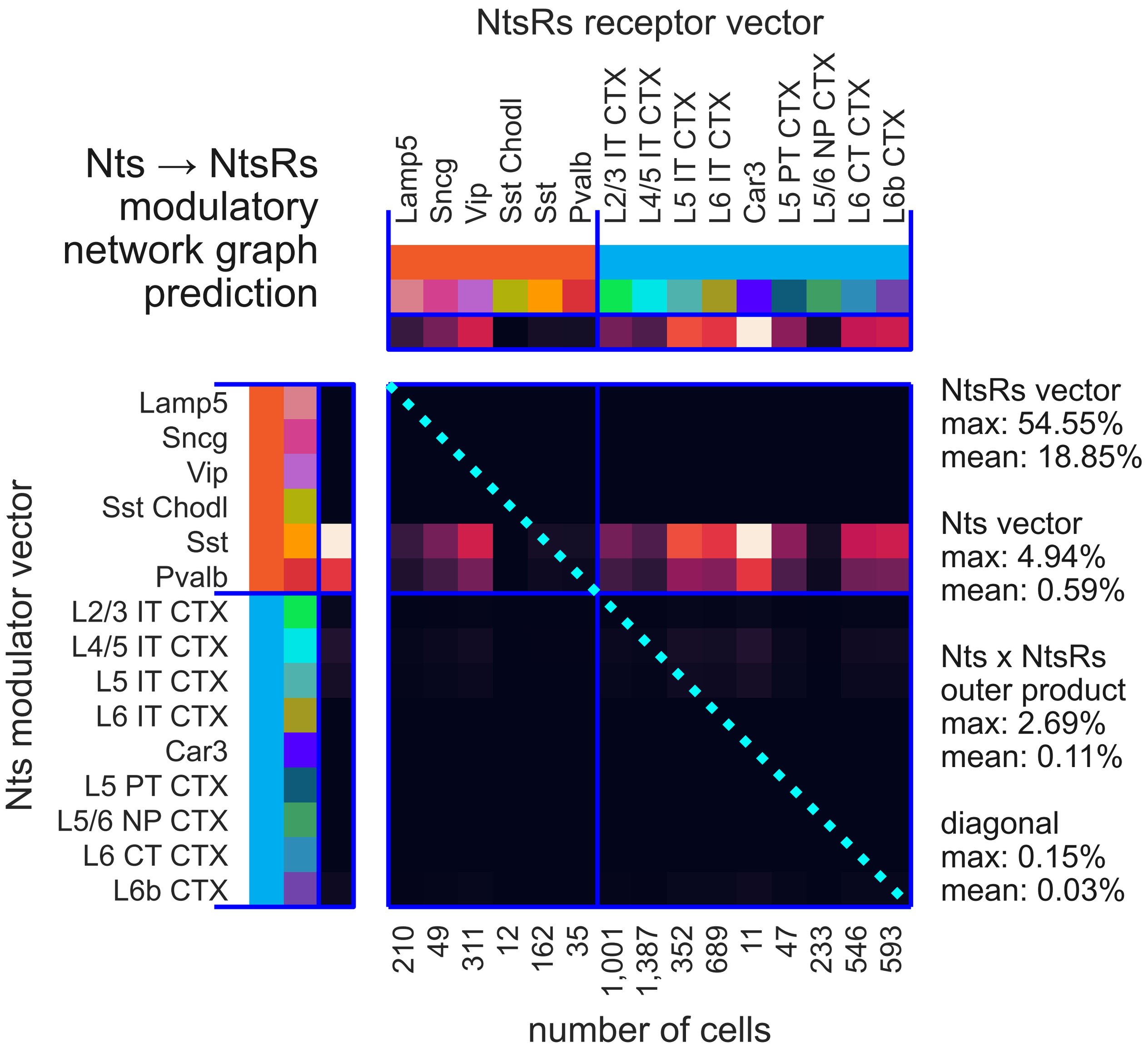

Y21ss thr=10 sn:12402
Visual Cortex (VIS)
NtsRs receptor vector
Nts → NtsRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Nts modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
NtsRs vector
max: 68.75%
mean: 23.22%
Nts vector
max: 1.31%
mean: 0.14%
Nts x NtsRs
outer product
max: 0.90%
mean: 0.03%
diagonal
max: 0.14%
mean: 0.02%

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)

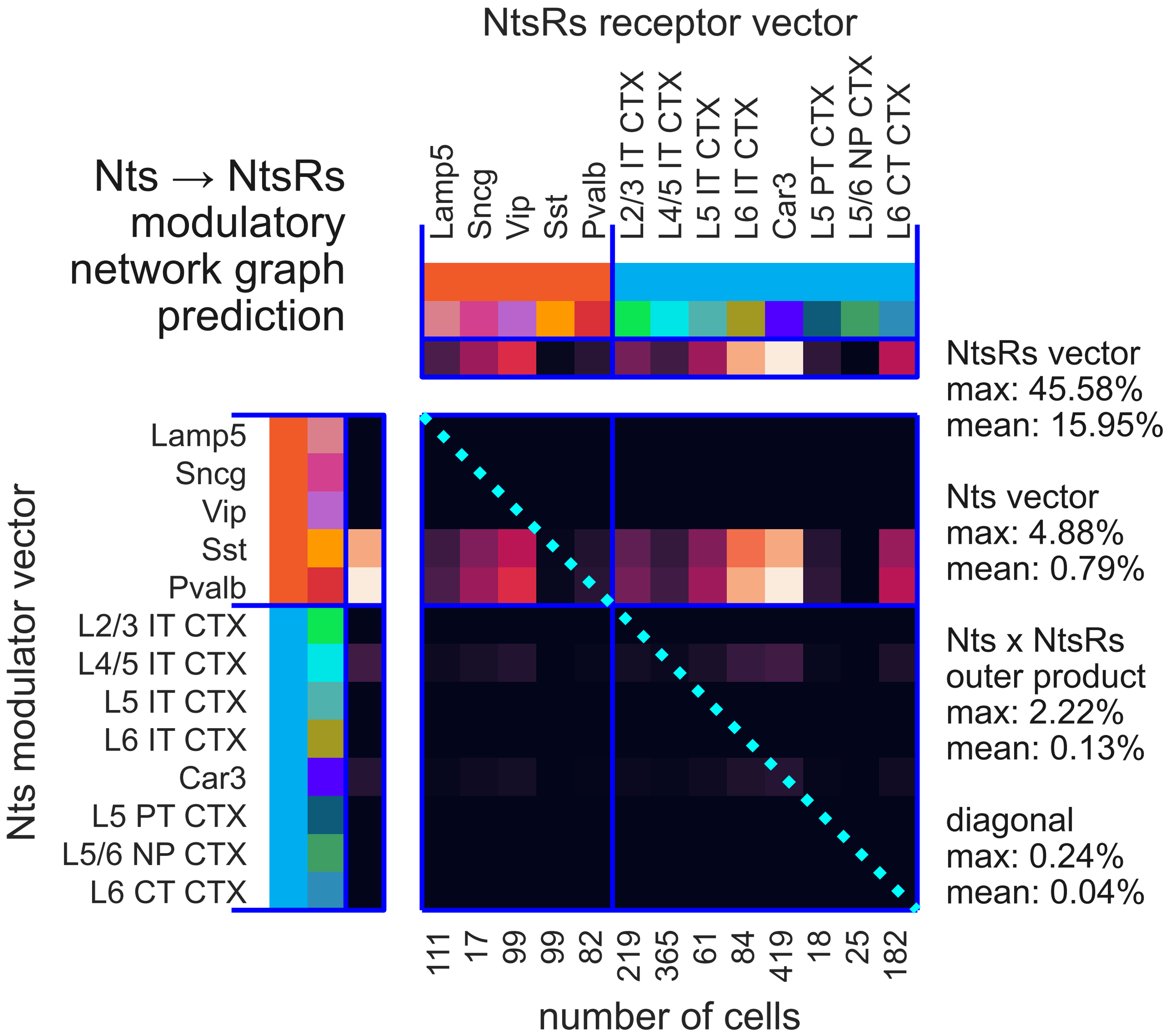


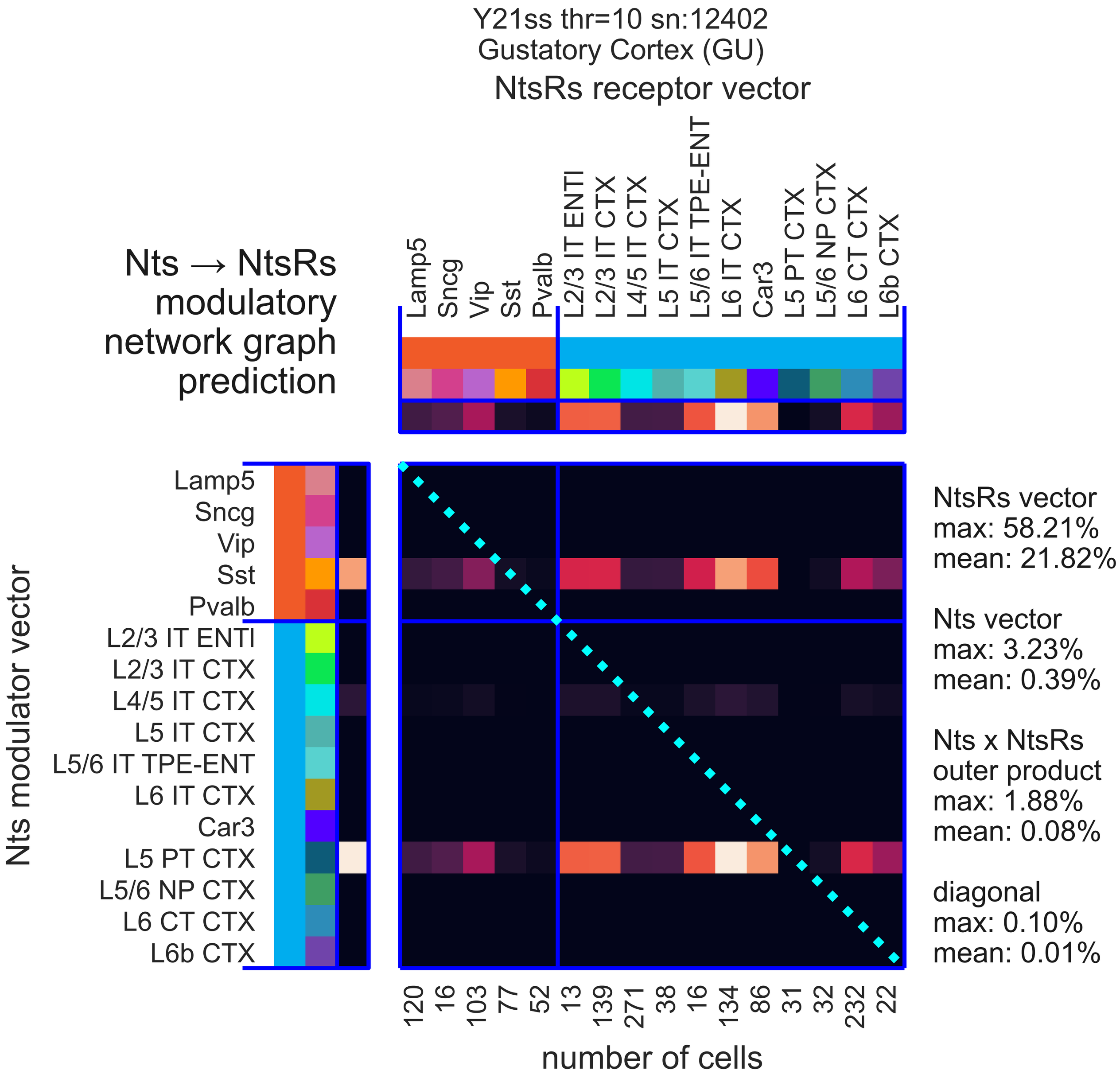

Y21ss thr=10 sn:12402
Auditory Cortex (AUD)
NtsRs receptor vector
Nts → NtsRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Nts modulator vector
81
18
114
115
73
249
365
50
97
67
17
27
145
10
number of cells
NtsRs vector
max: 80.00%
mean: 21.16%
Nts vector
max: 8.77%
mean: 0.69%
Nts x NtsRs
outer product
max: 7.01%
mean: 0.15%
diagonal
max: 0.62%
mean: 0.05%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

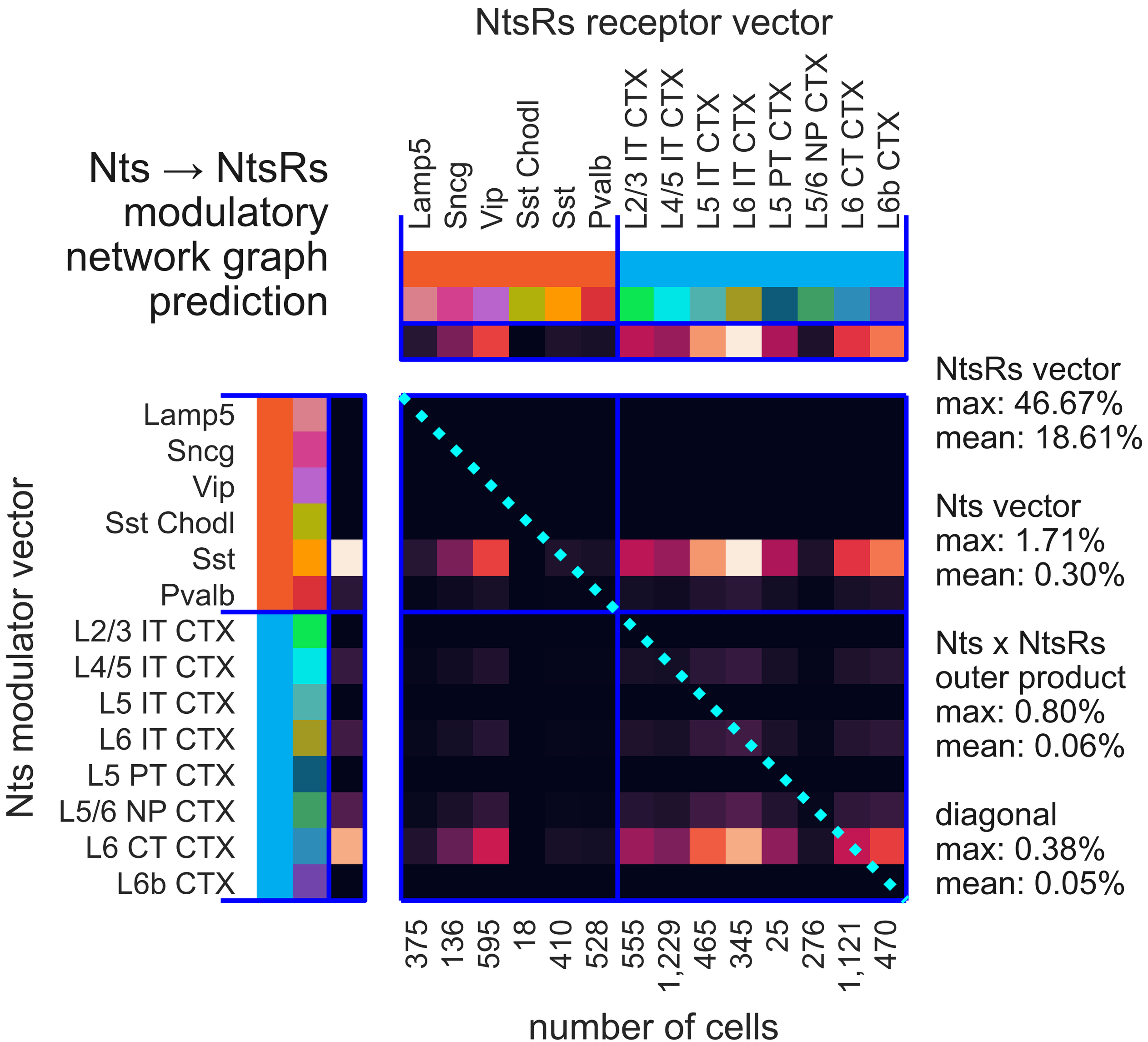


Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)

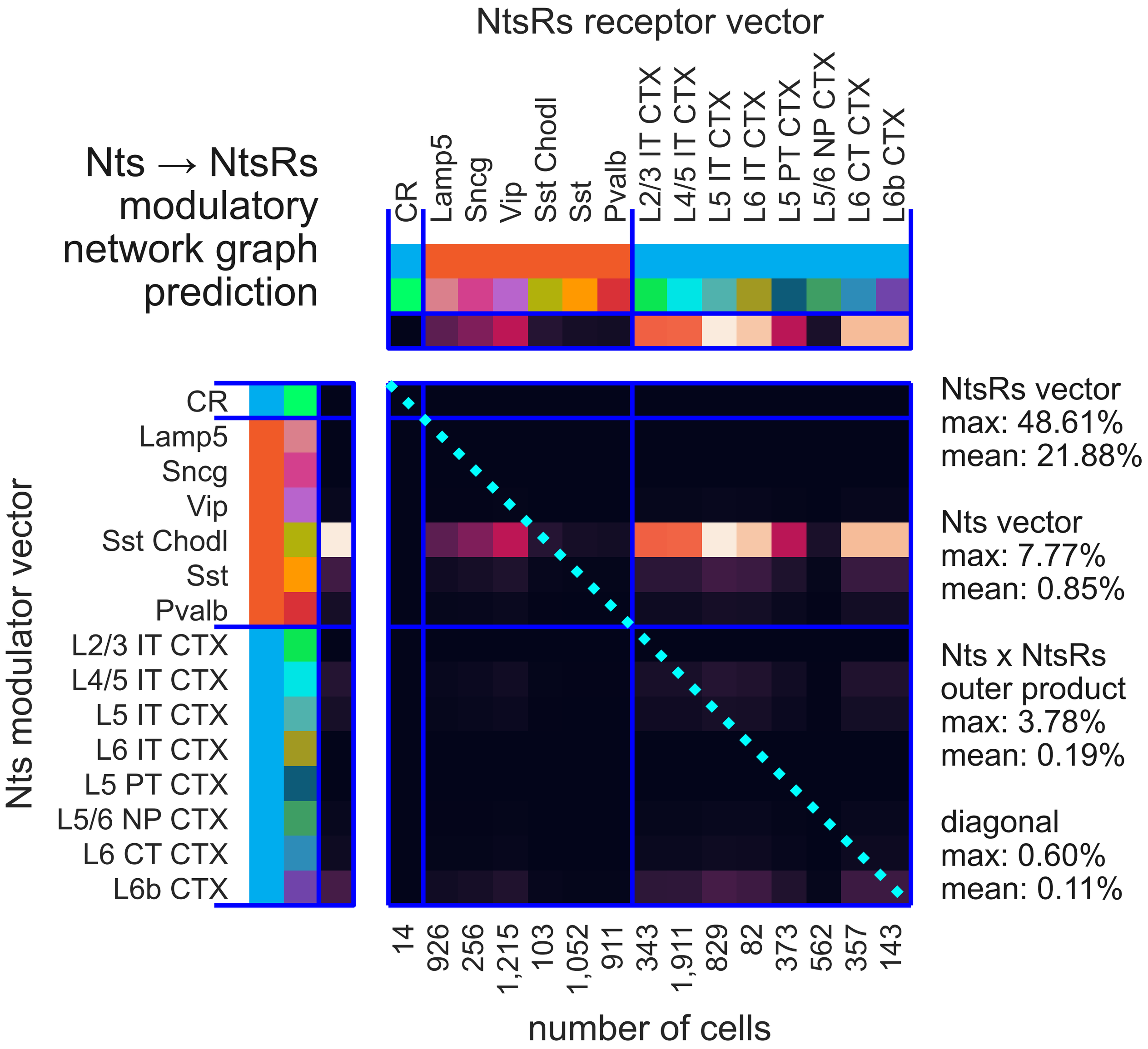


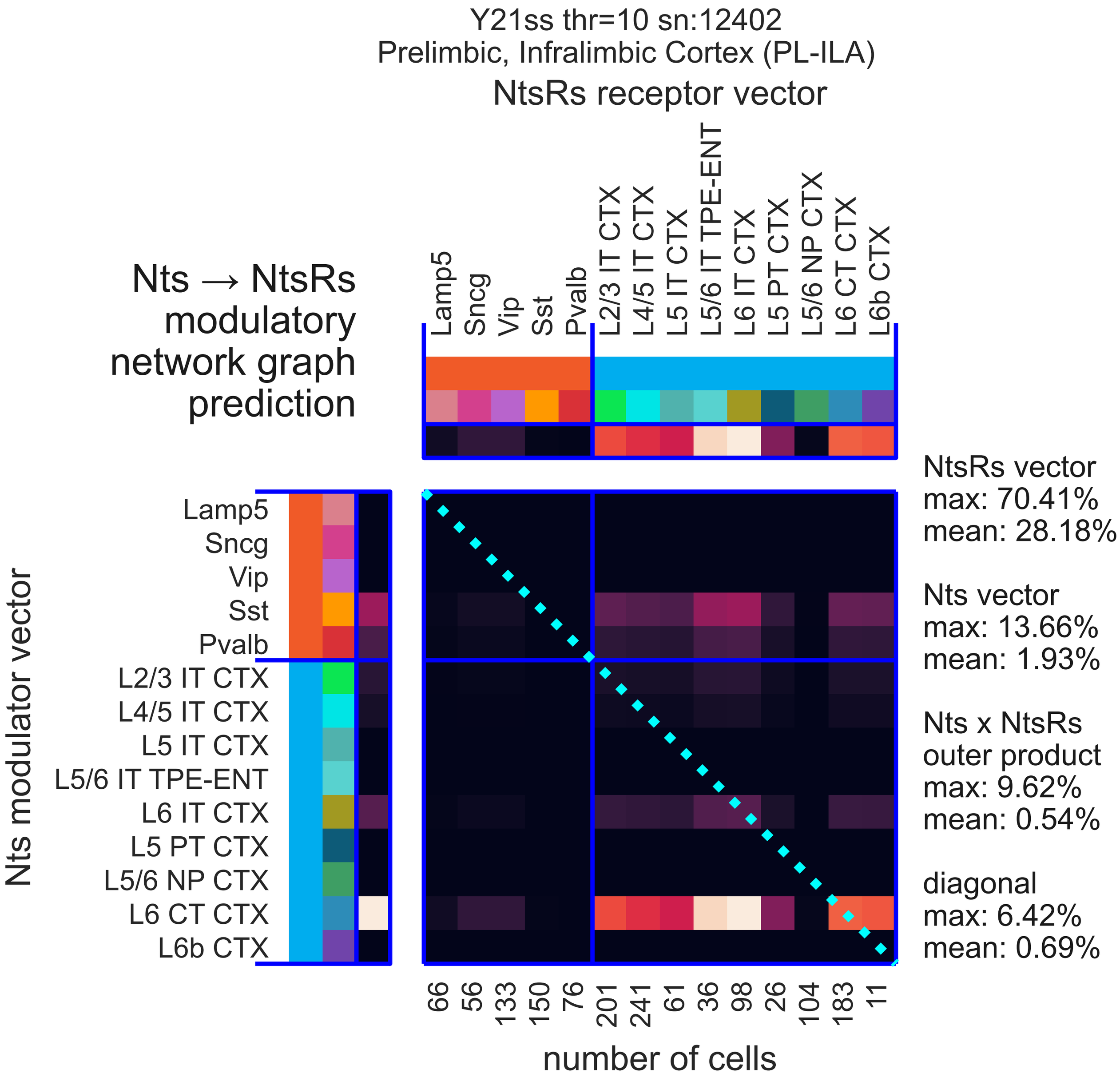

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
NtsRs receptor vector
Nts → NtsRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Nts modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
NtsRs vector
max: 58.21%
mean: 21.82%
Nts vector
max: 3.23%
mean: 0.39%
Nts x NtsRs
outer product
max: 1.88%
mean: 0.08%
diagonal
max: 0.10%
mean: 0.01%

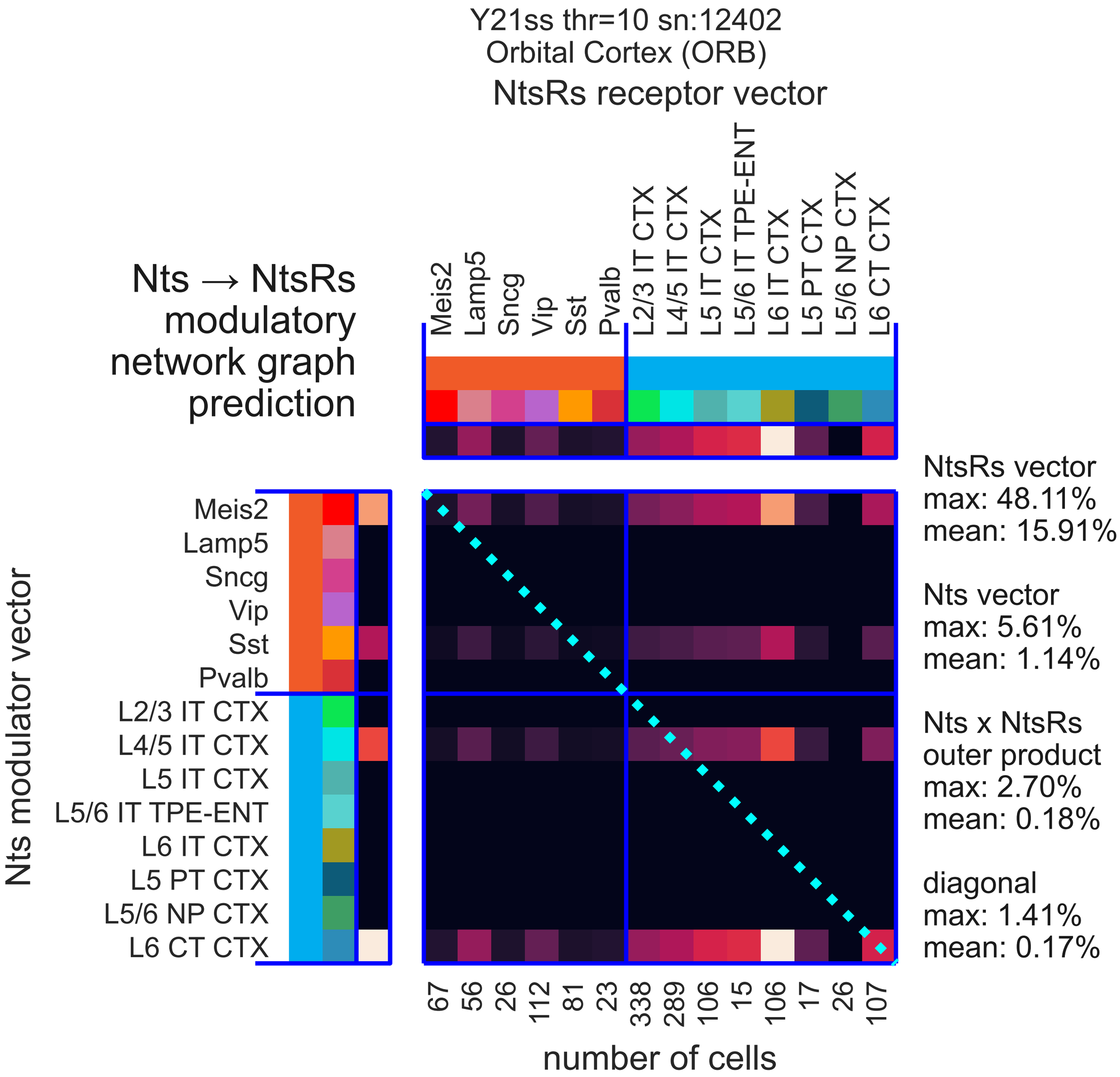
Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



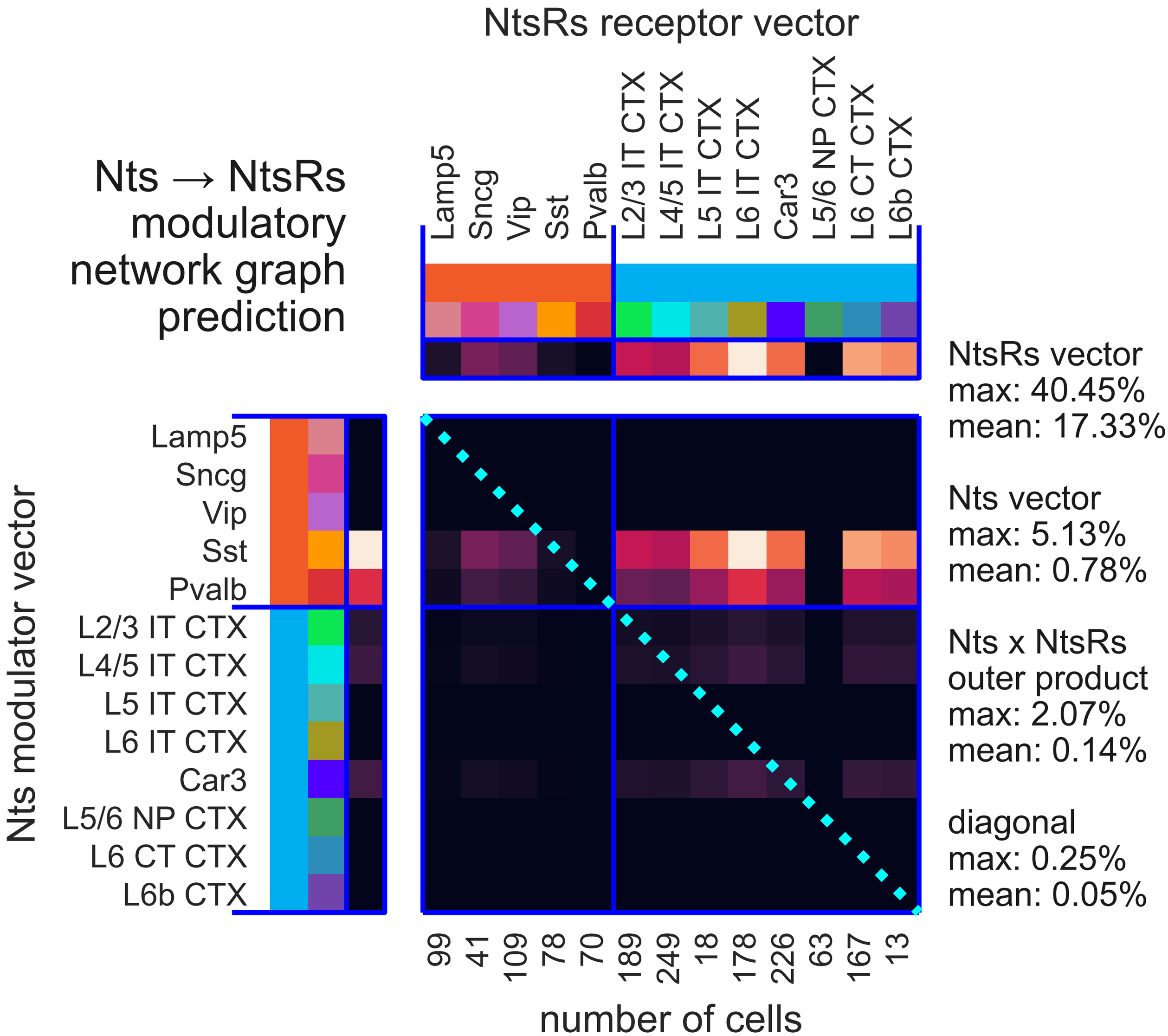
Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

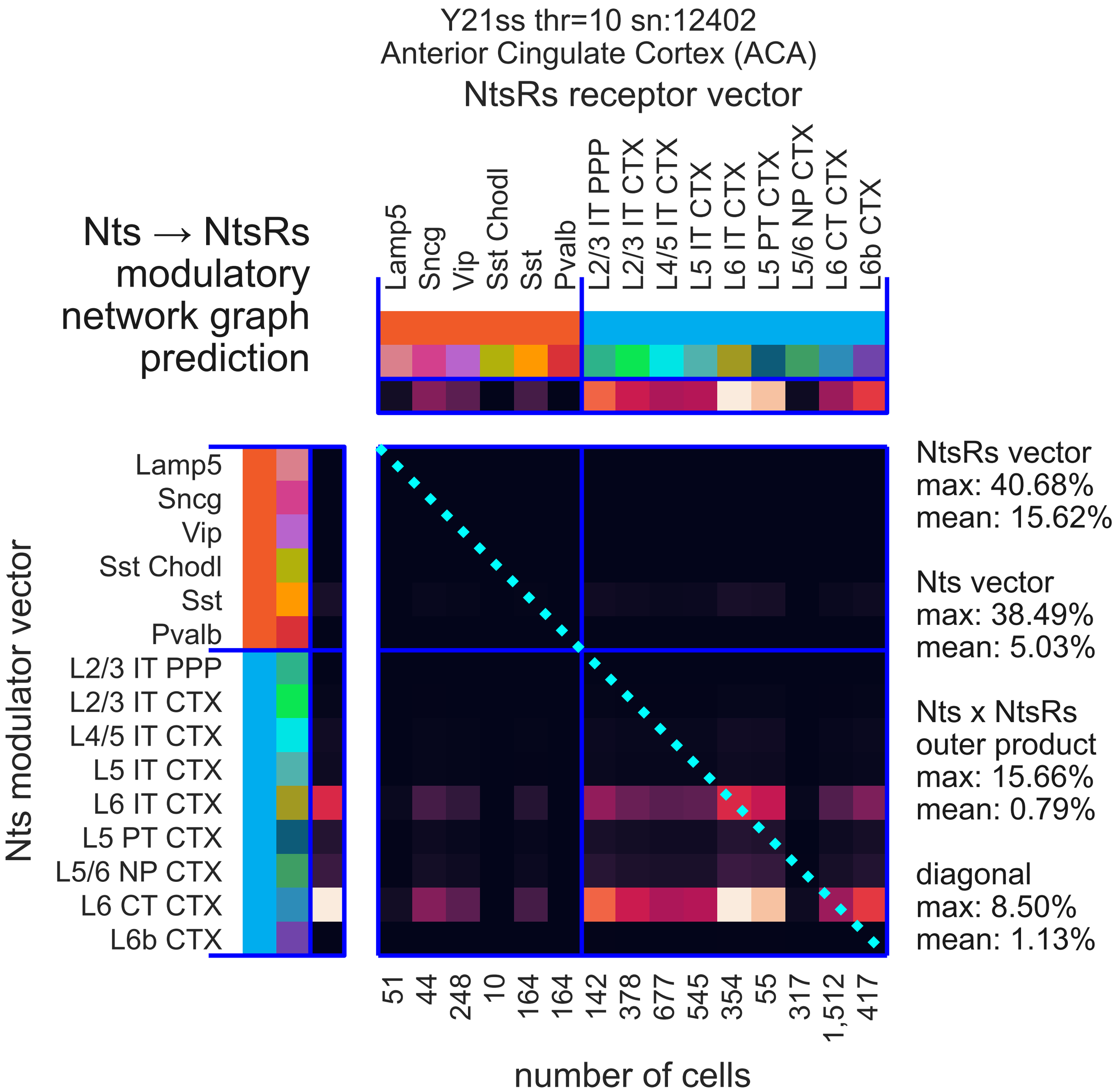


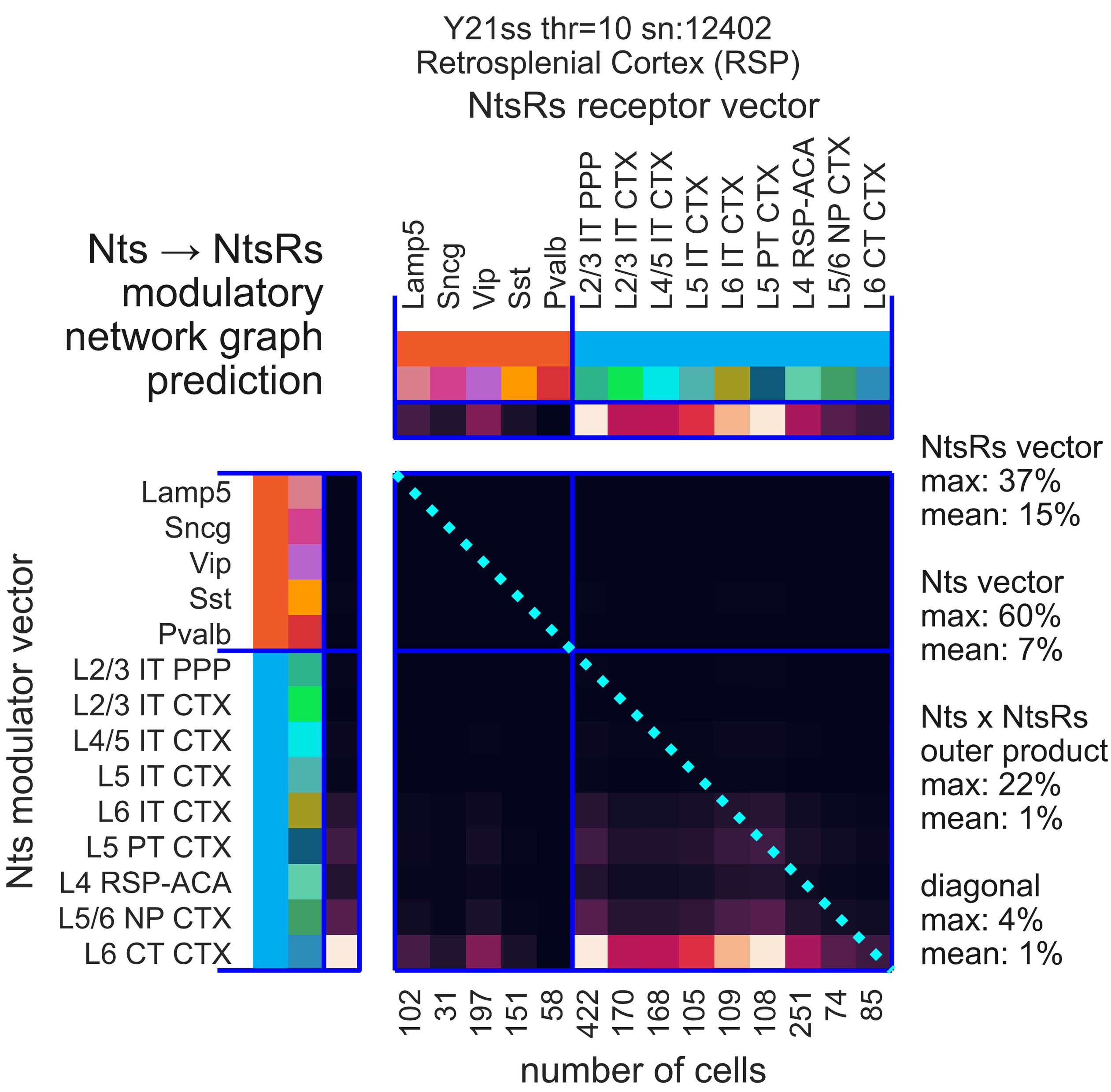

Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)
NtsRs receptor vector
Nts → NtsRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Nts modulator vector
66
56
133
150
76
201
241
61
36
98
26
104
183
11
number of cells
NtsRs vector
max: 70.41%
mean: 28.18%
Nts vector
max: 13.66%
mean: 1.93%
Nts x NtsRs
outer product
max: 9.62%
mean: 0.54%
diagonal
max: 6.42%
mean: 0.69%


Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
NtsRs receptor vector
Nts → NtsRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Nts modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
NtsRs vector
max: 48.11%
mean: 15.91%
Nts vector
max: 5.61%
mean: 1.14%
Nts x NtsRs
outer product
max: 2.70%
mean: 0.18%
diagonal
max: 1.41%
mean: 0.17%

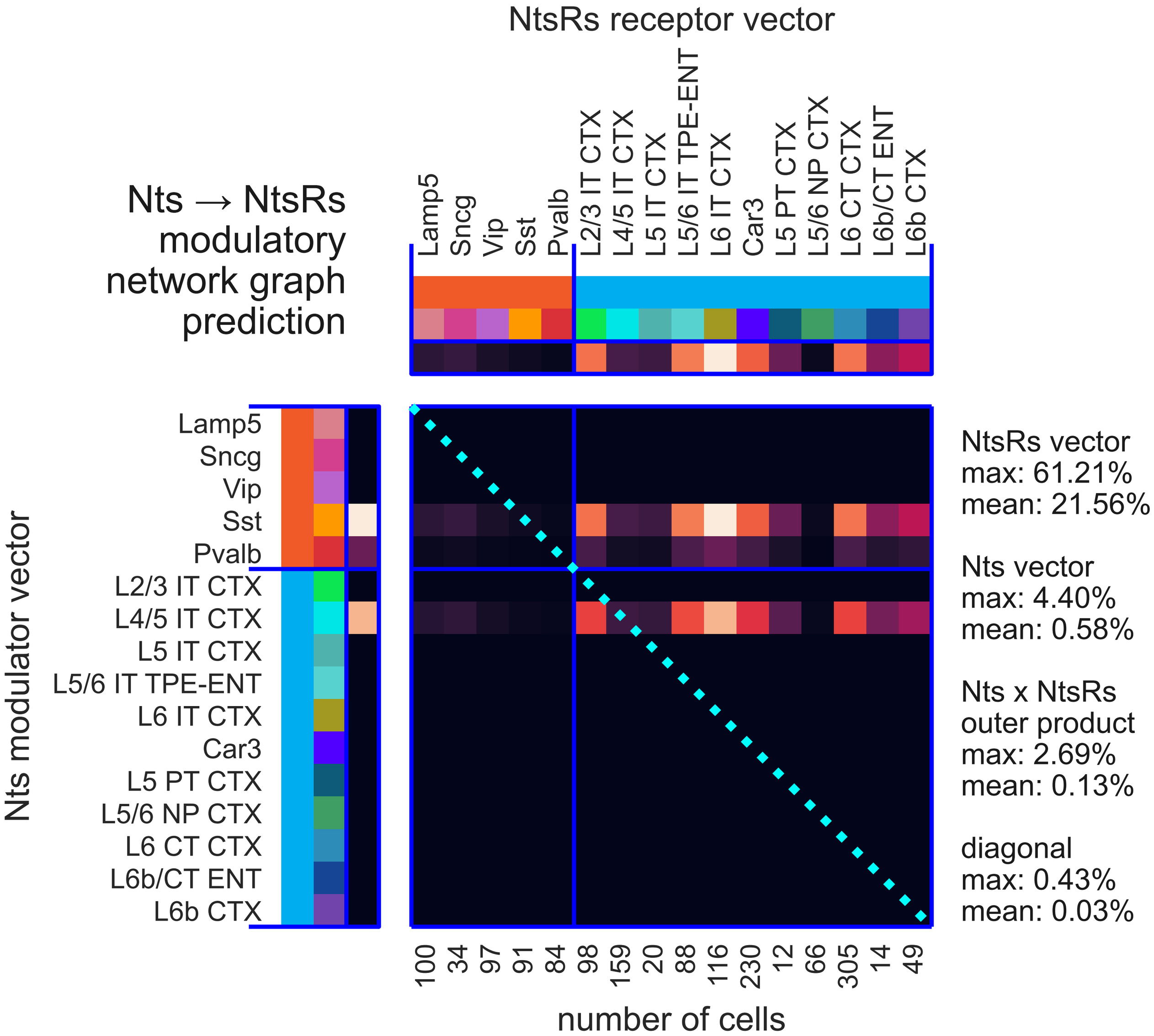
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



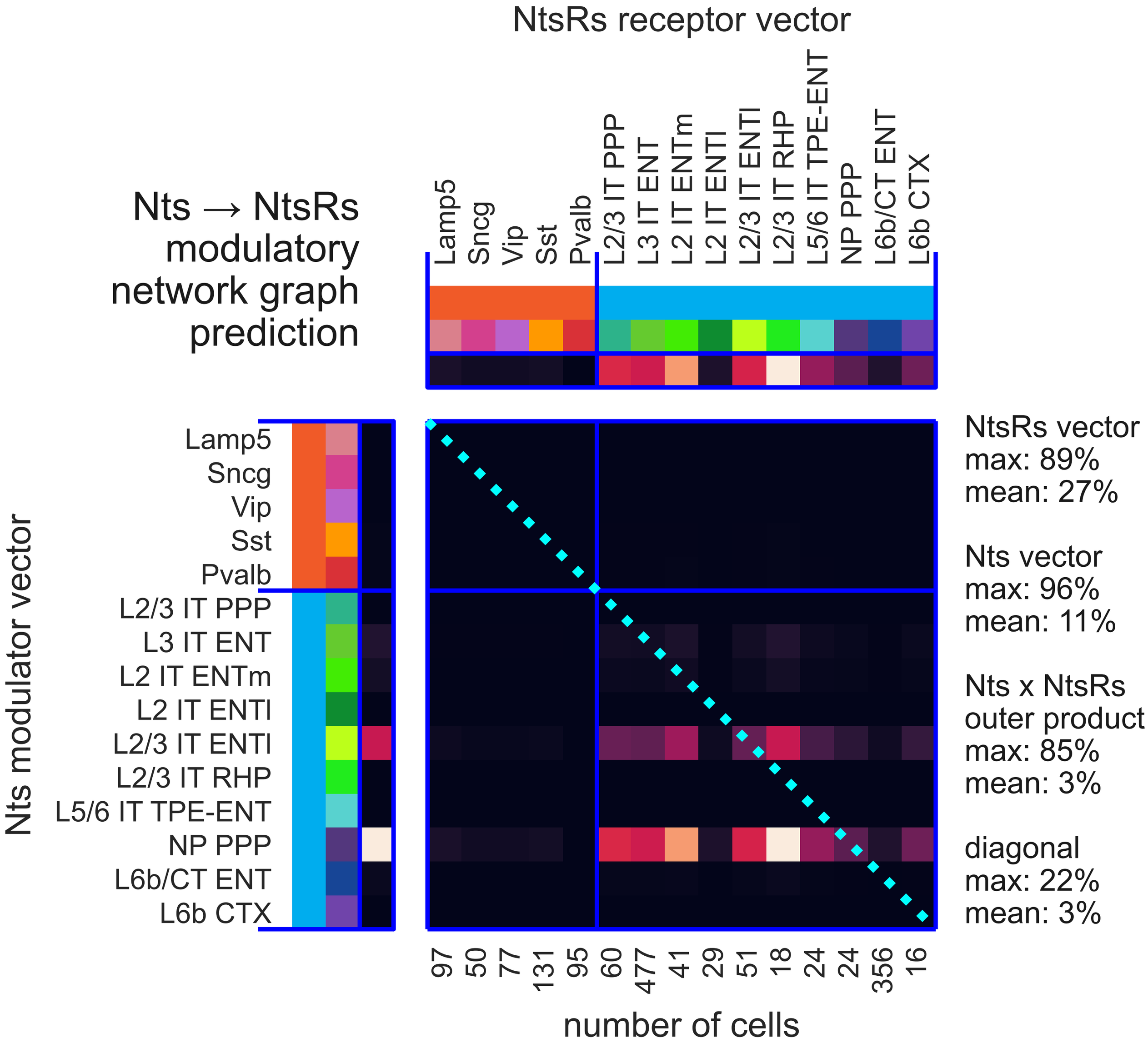

Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)
NtsRs receptor vector
Nts → NtsRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Nts modulator vector
NtsRs vector
max: 40.68%
mean: 15.62%
Nts vector
max: 38.49%
mean: 5.03%
Nts x NtsRs
outer product
max: 15.66%
mean: 0.79%
diagonal
max: 8.50%
mean: 1.13%
51
44
248
10
164
164
142
378
677
545
354
55
317
1,512
417
number of cells

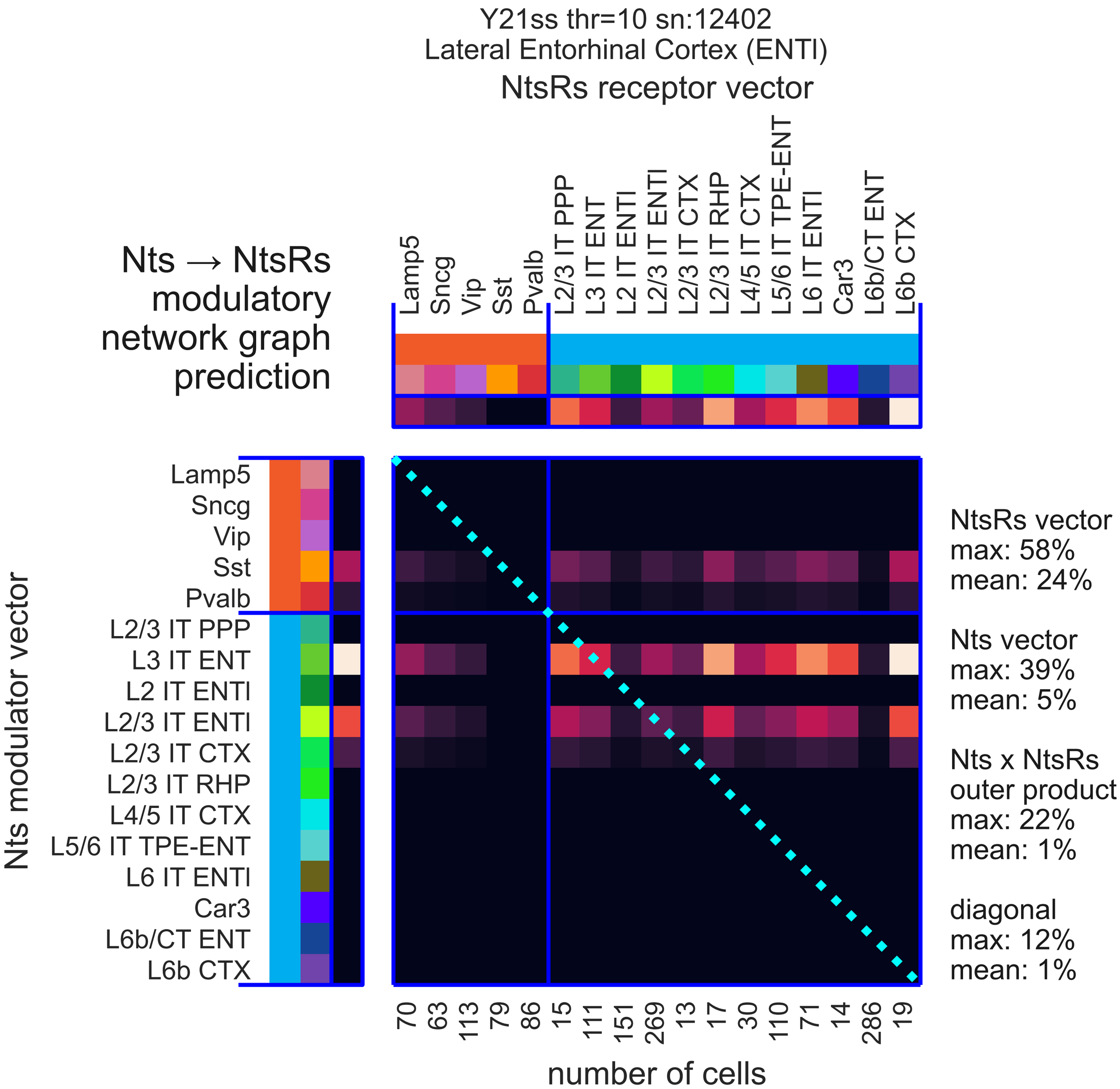

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
NtsRs receptor vector
Nts → NtsRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
NtsRs vector
max: 37%
mean: 15%
Nts vector
max: 60%
mean: 7%
Nts x NtsRs
outer product
max: 22%
mean: 1%
diagonal
max: 4%
mean: 1%
Nts modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

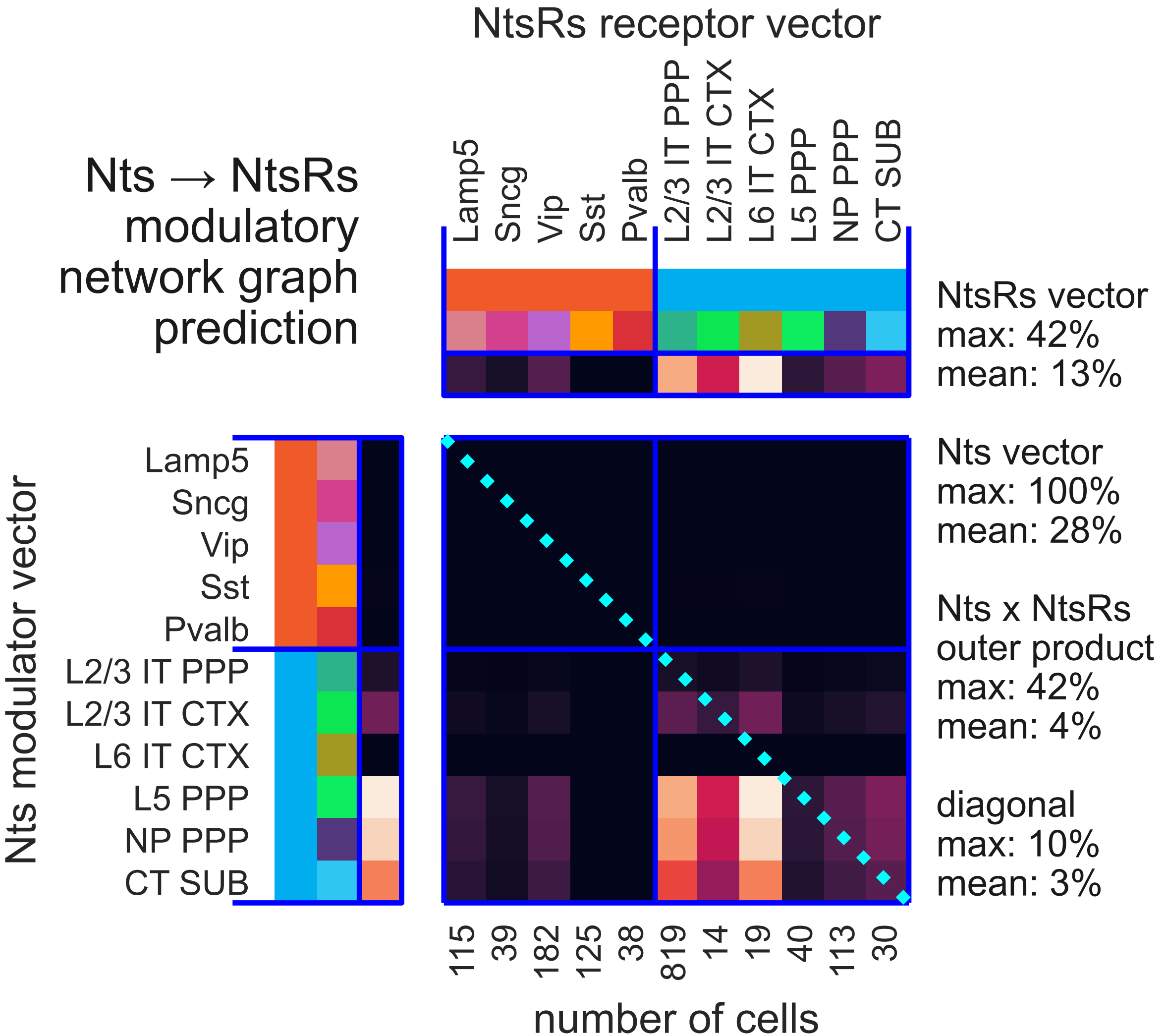


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

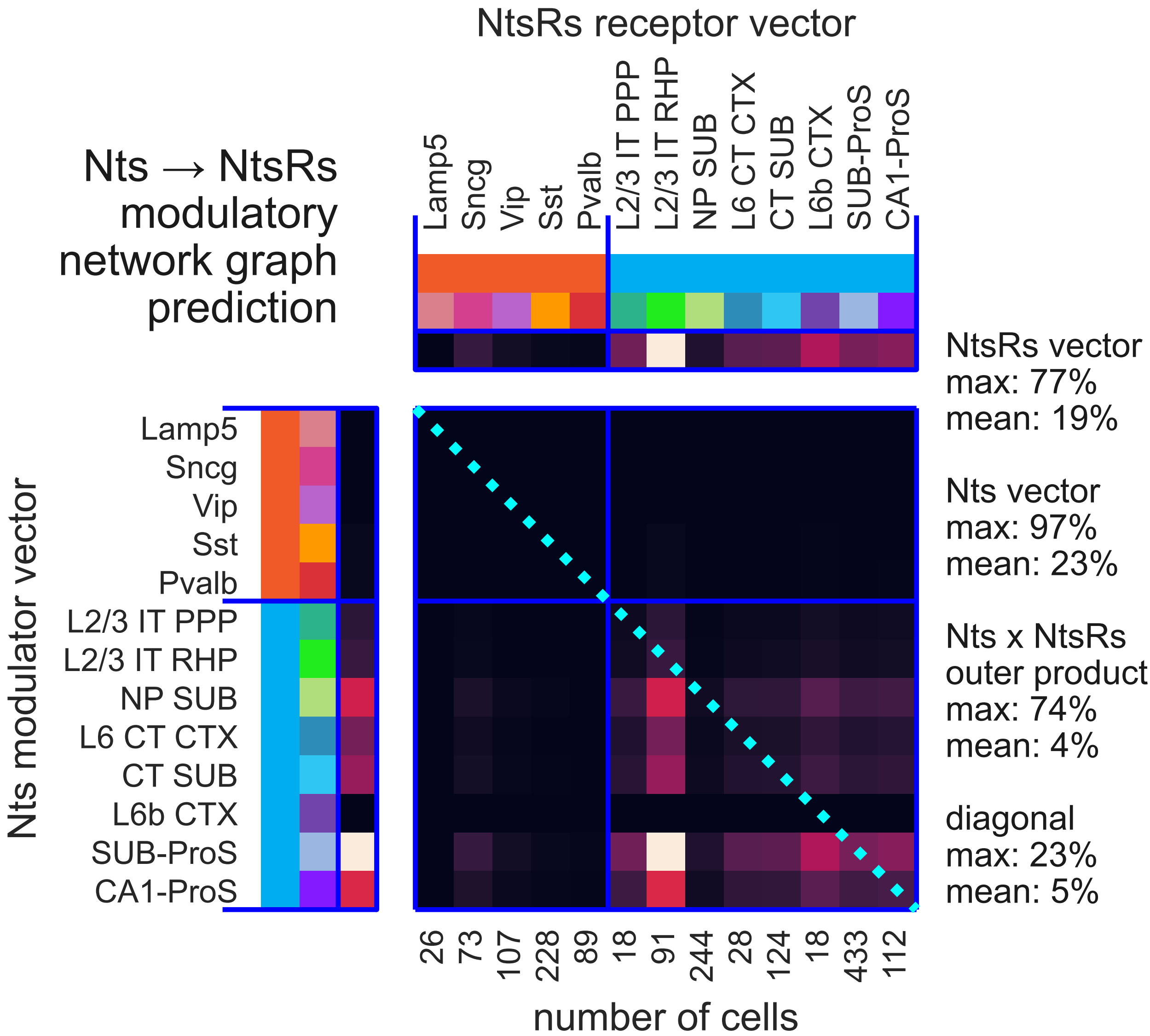



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
NtsRs receptor vector
Nts → NtsRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Nts modulator vector
NtsRs vector
max: 58%
mean: 24%
Nts vector
max: 39%
mean: 5%
Nts x NtsRs
outer product
max: 22%
mean: 1%
diagonal
max: 12%
mean: 1%
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



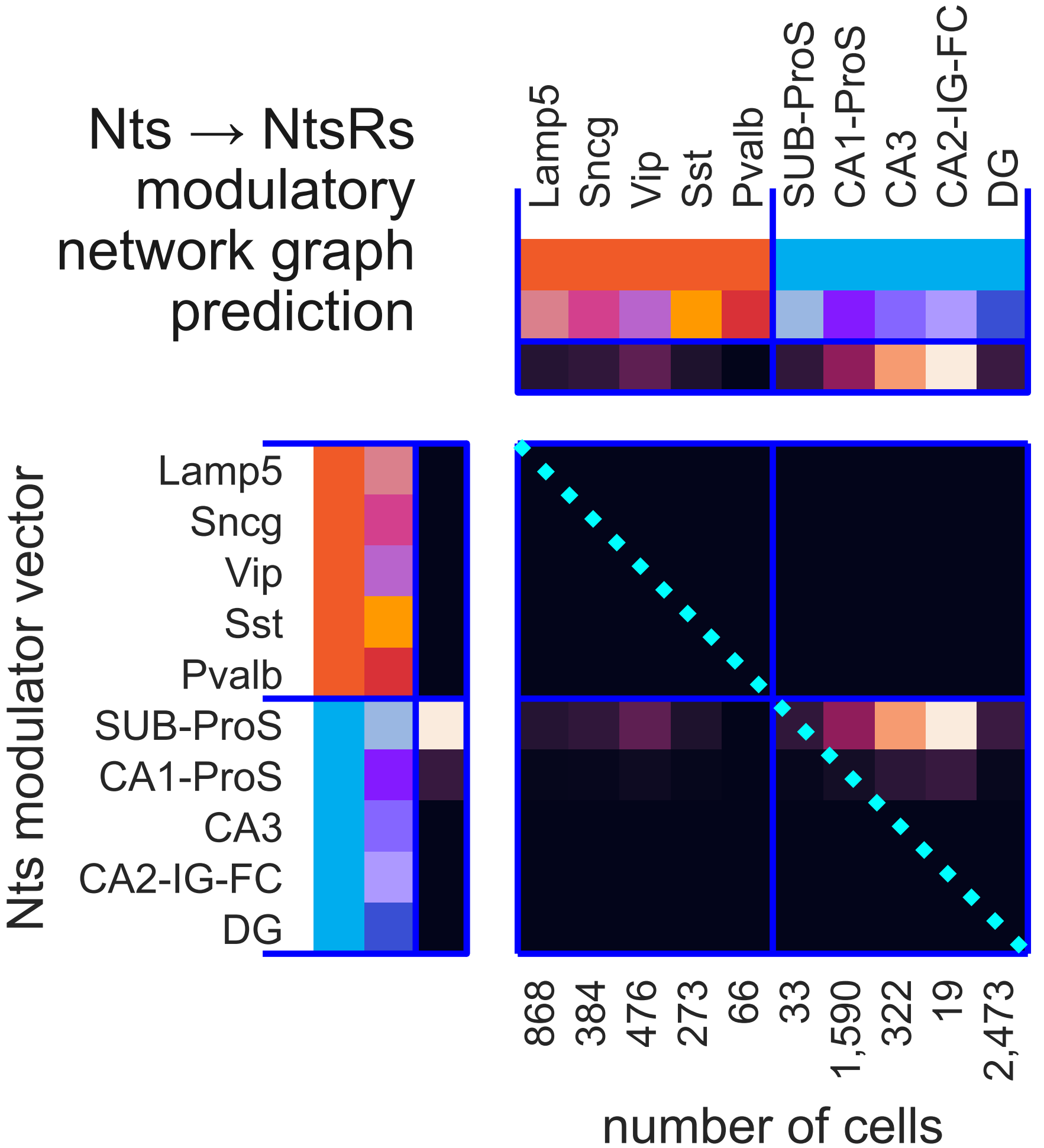
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



Y21ss thr=10 sn:12402
Hippocampus (HIP)

NtsRs receptor vector

Nts → NtsRs modulatory network graph prediction



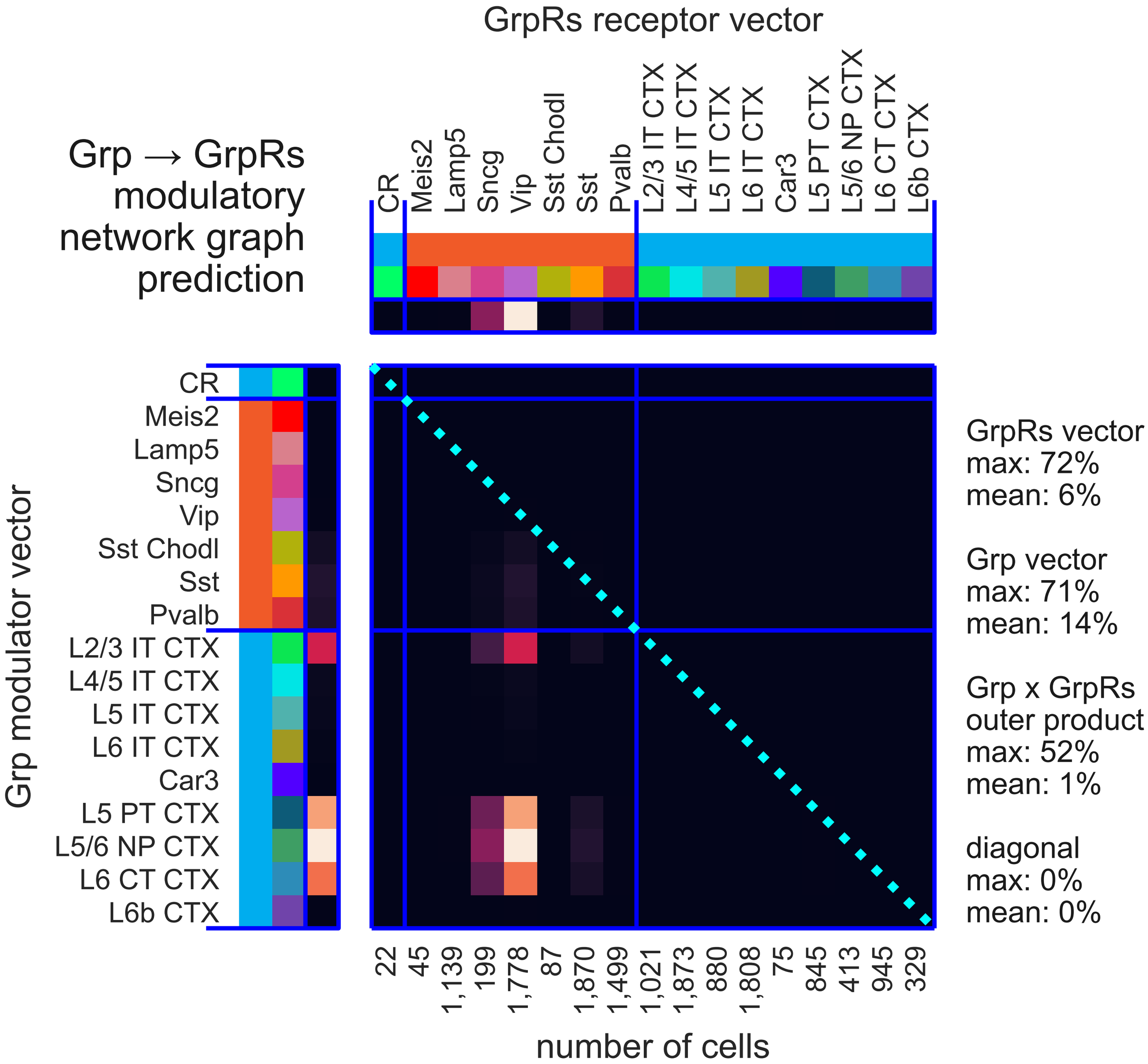
NtsRs vector
max: 95%
mean: 28%

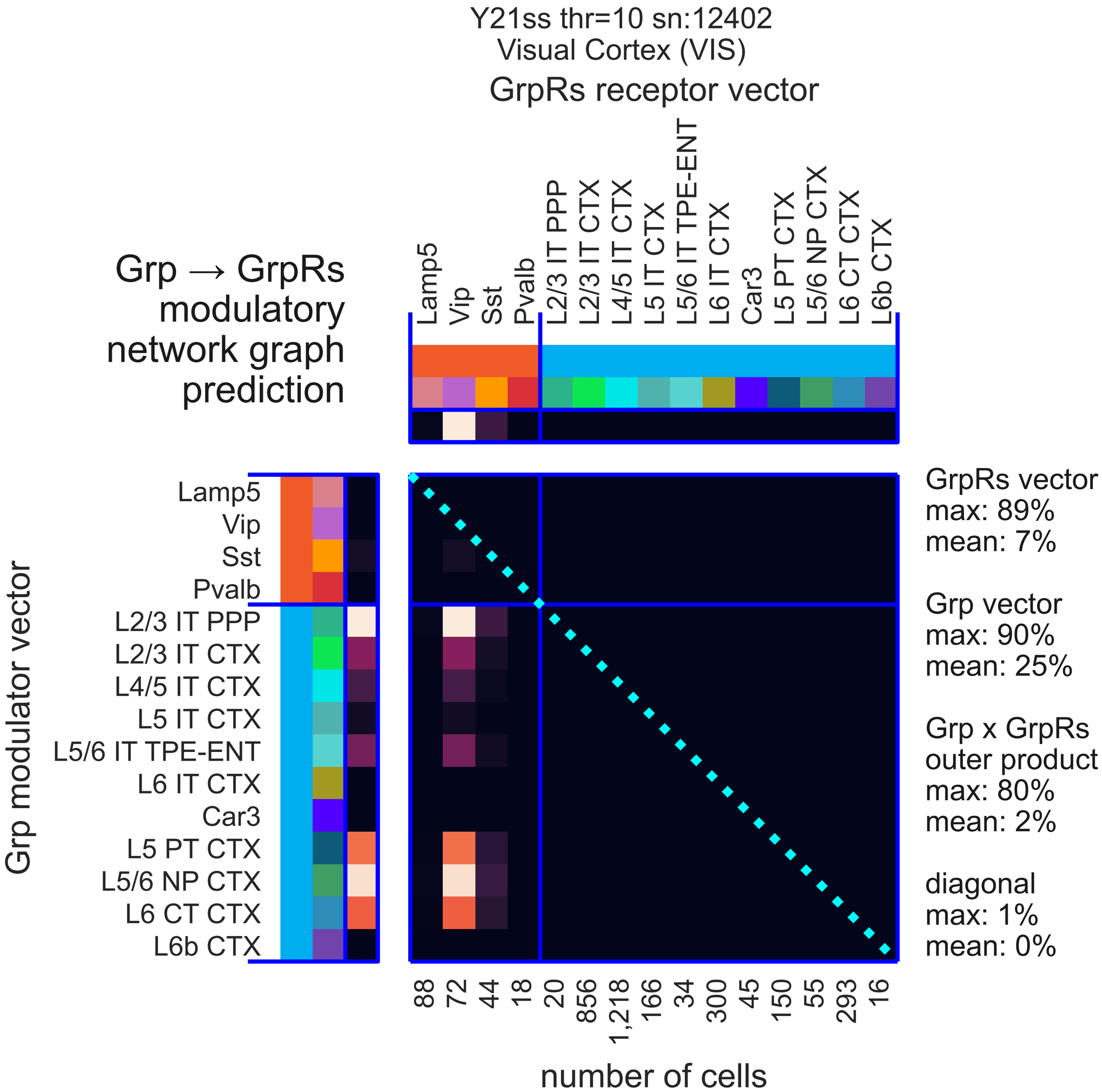
Nts vector
max: 97%
mean: 11%

Nts x NtsRs
outer product
max: 92%
mean: 3%

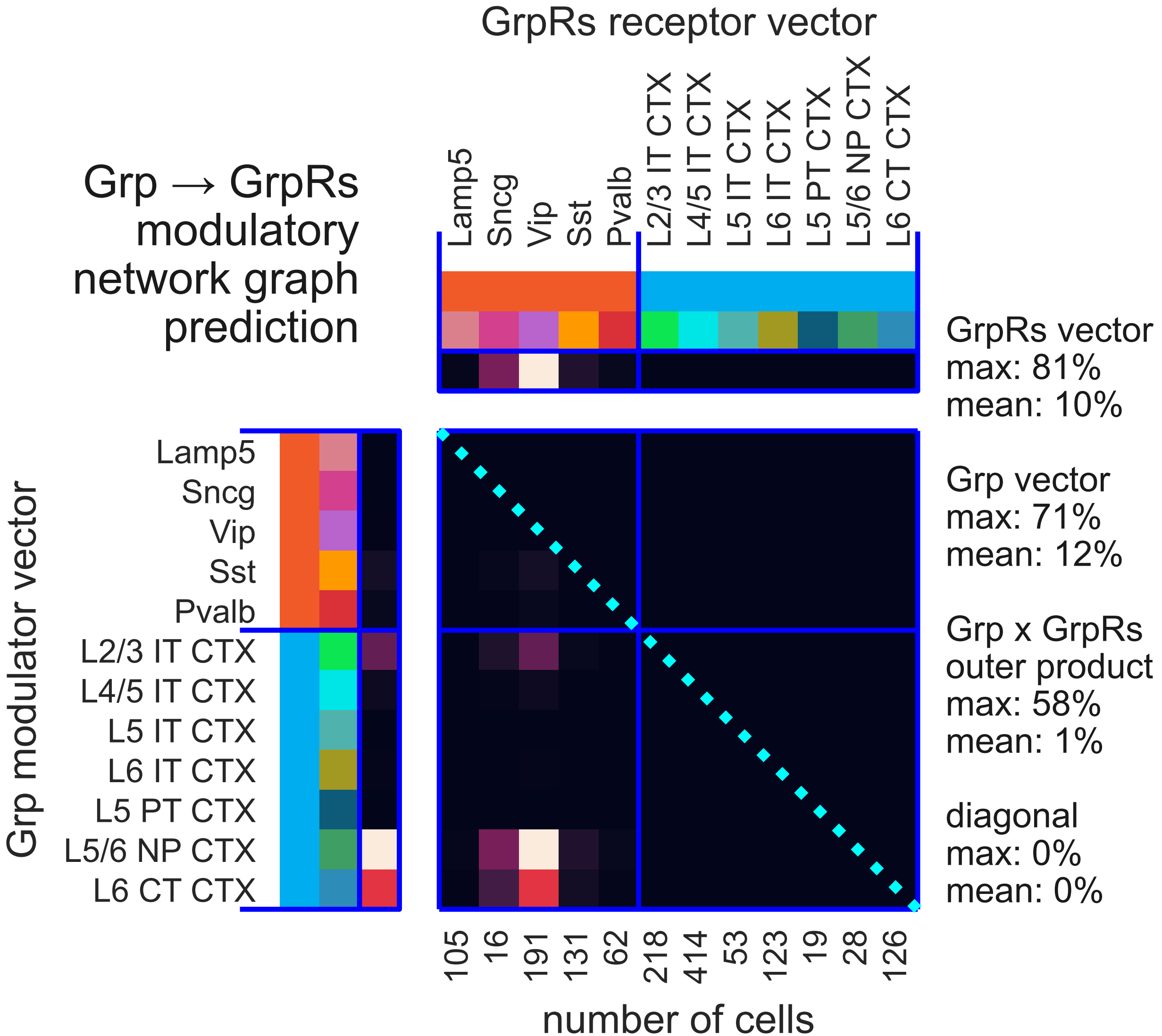
diagonal
max: 12%
mean: 2%

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)

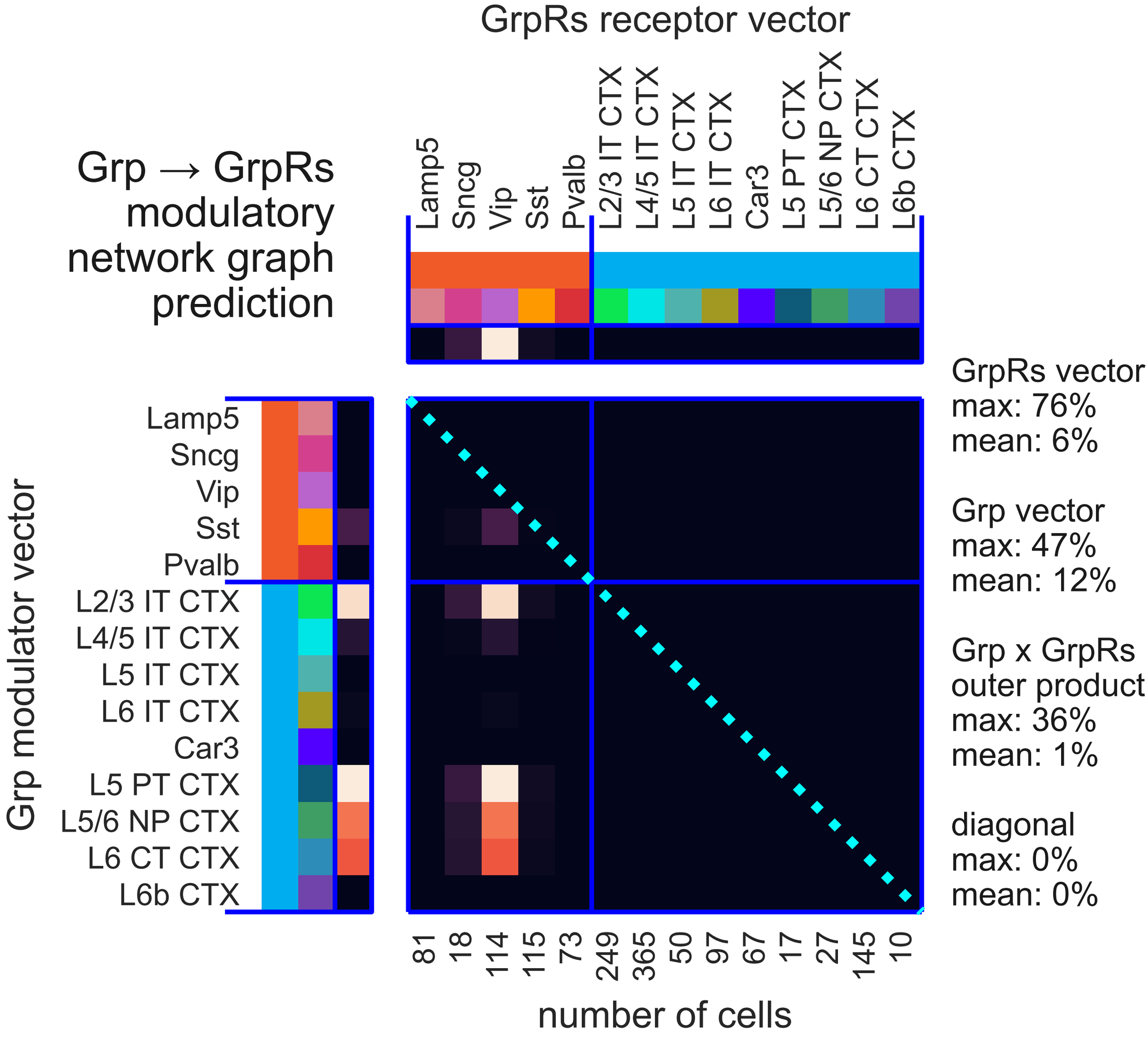



Y21ss thr=10 sn:12402
Visual Cortex (VIS)
GrpRs receptor vector
Grp → GrpRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Grp modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
GrpRs vector
max: 89%
mean: 7%
Grp vector
max: 90%
mean: 25%
Grp x GrpRs
outer product
max: 80%
mean: 2%
diagonal
max: 1%
mean: 0%

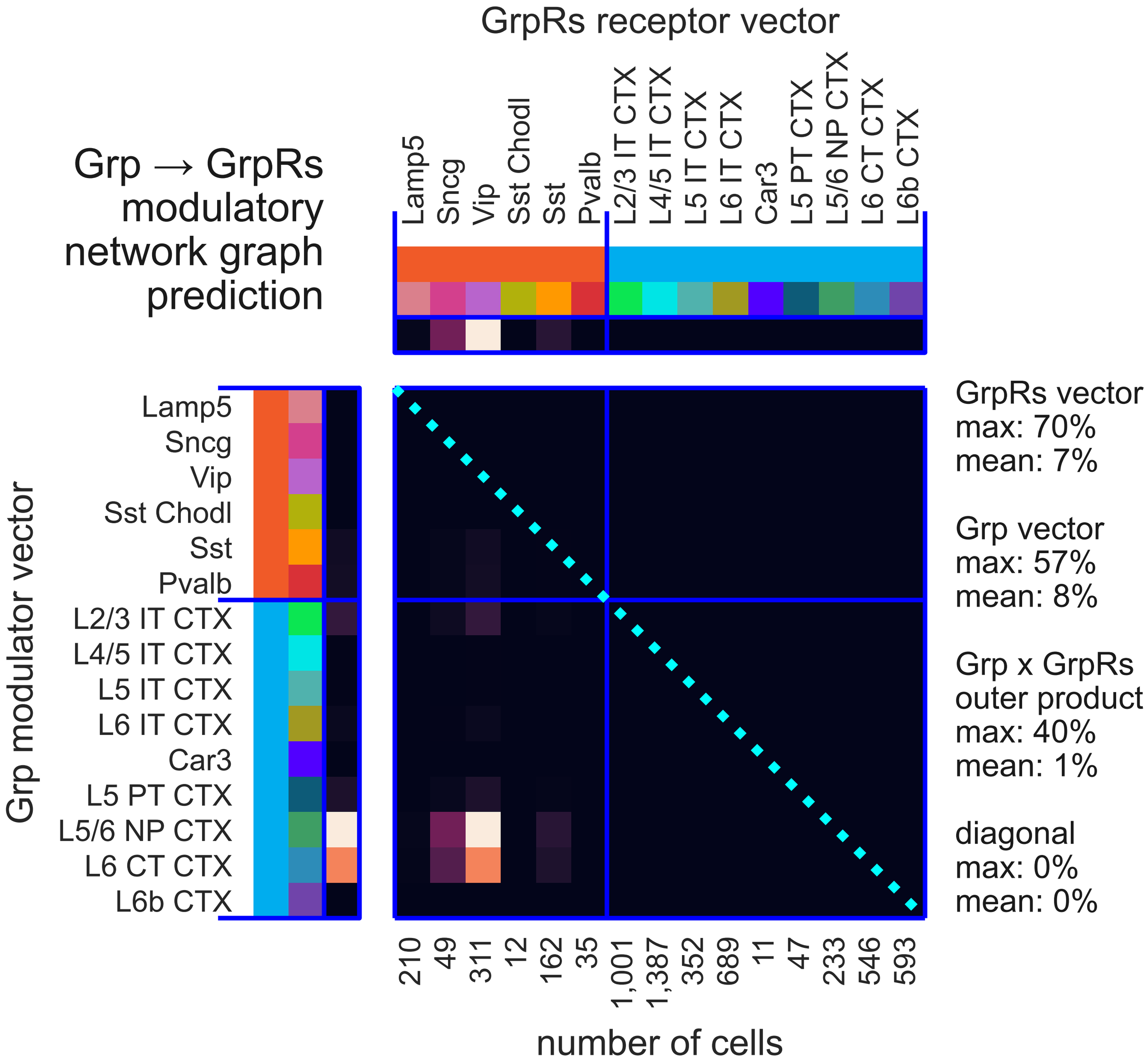
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



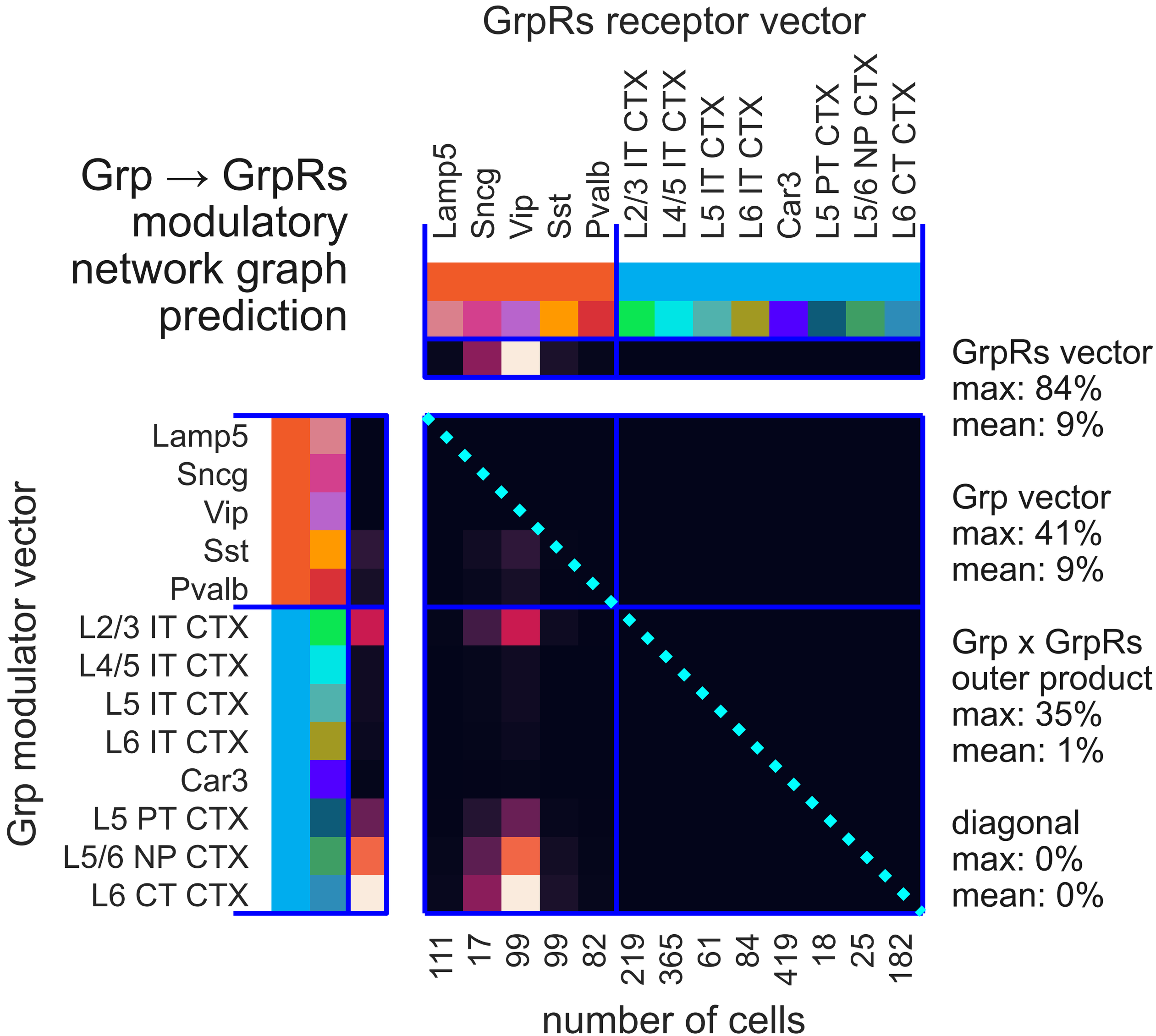
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)



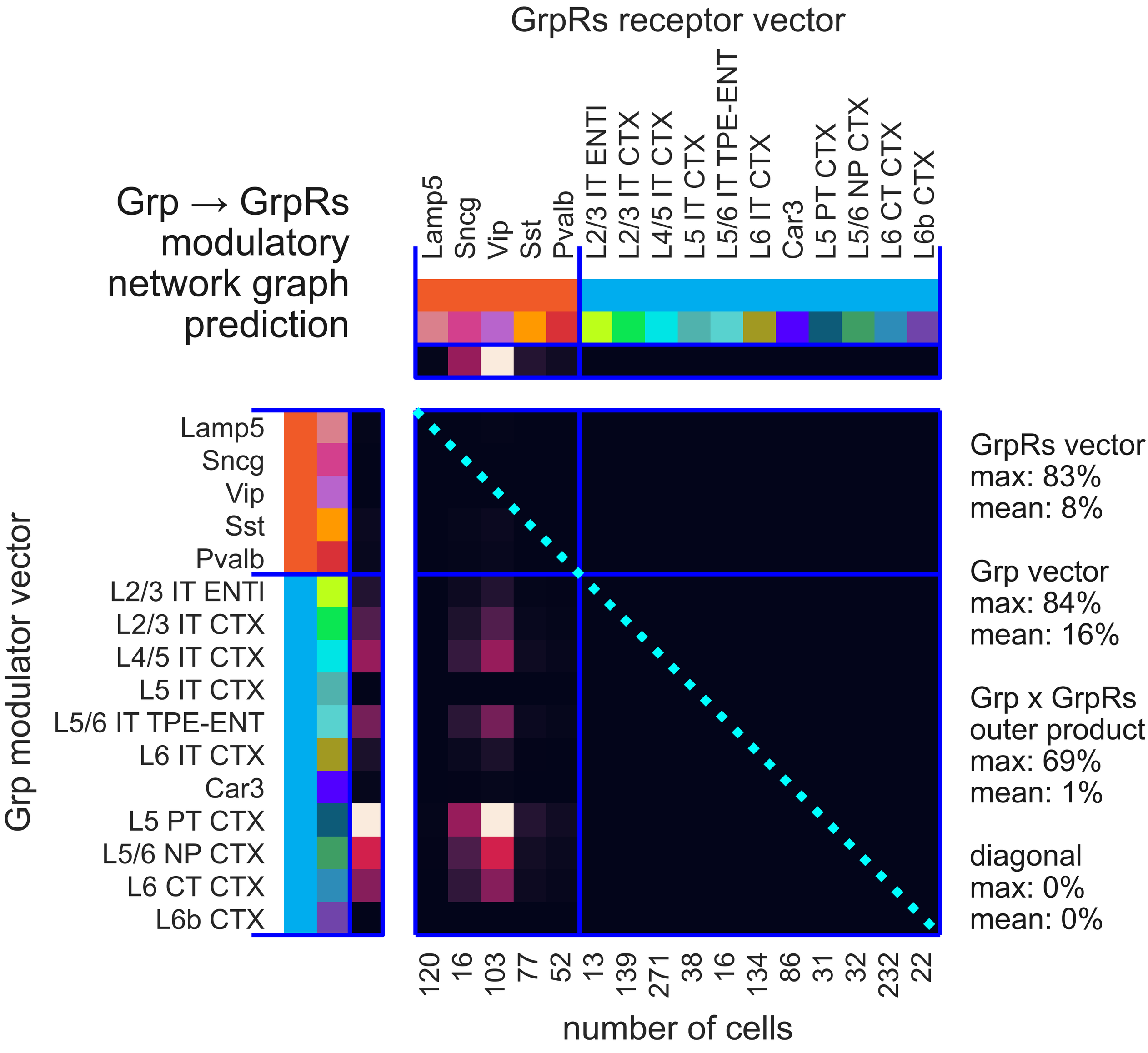
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

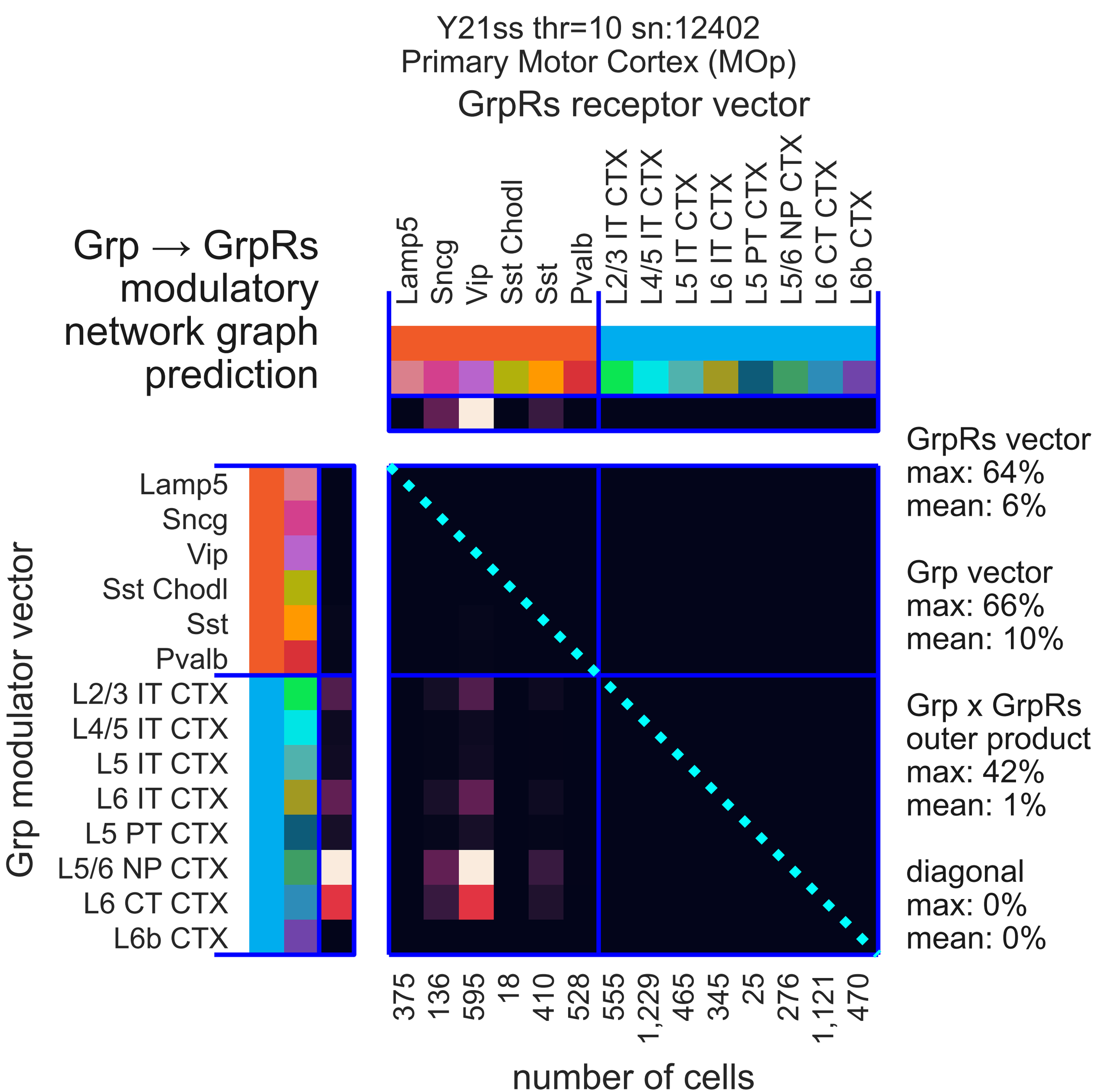


Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)

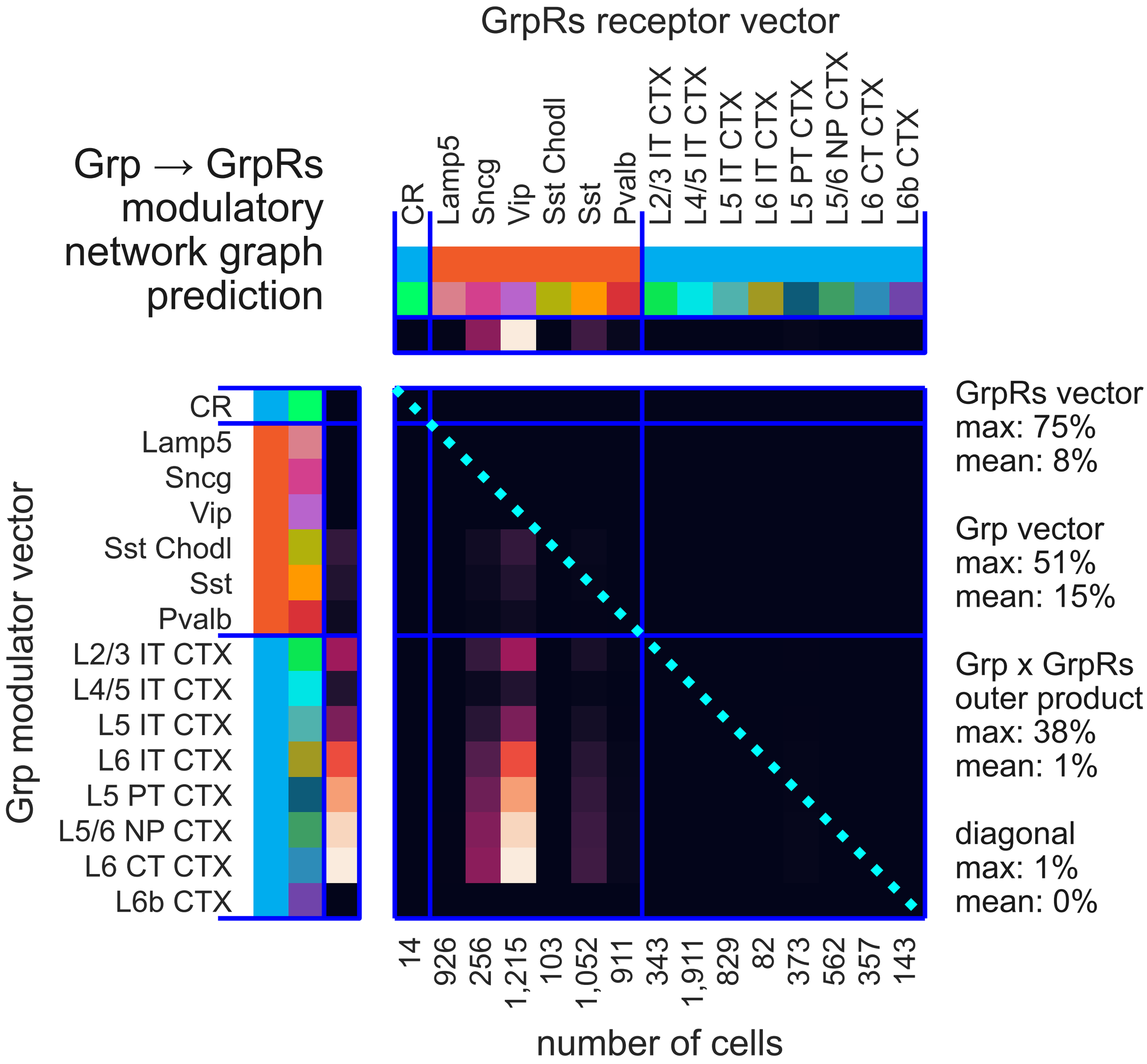


Y21ss thr=10 sn:12402
Gustatory Cortex (GU)

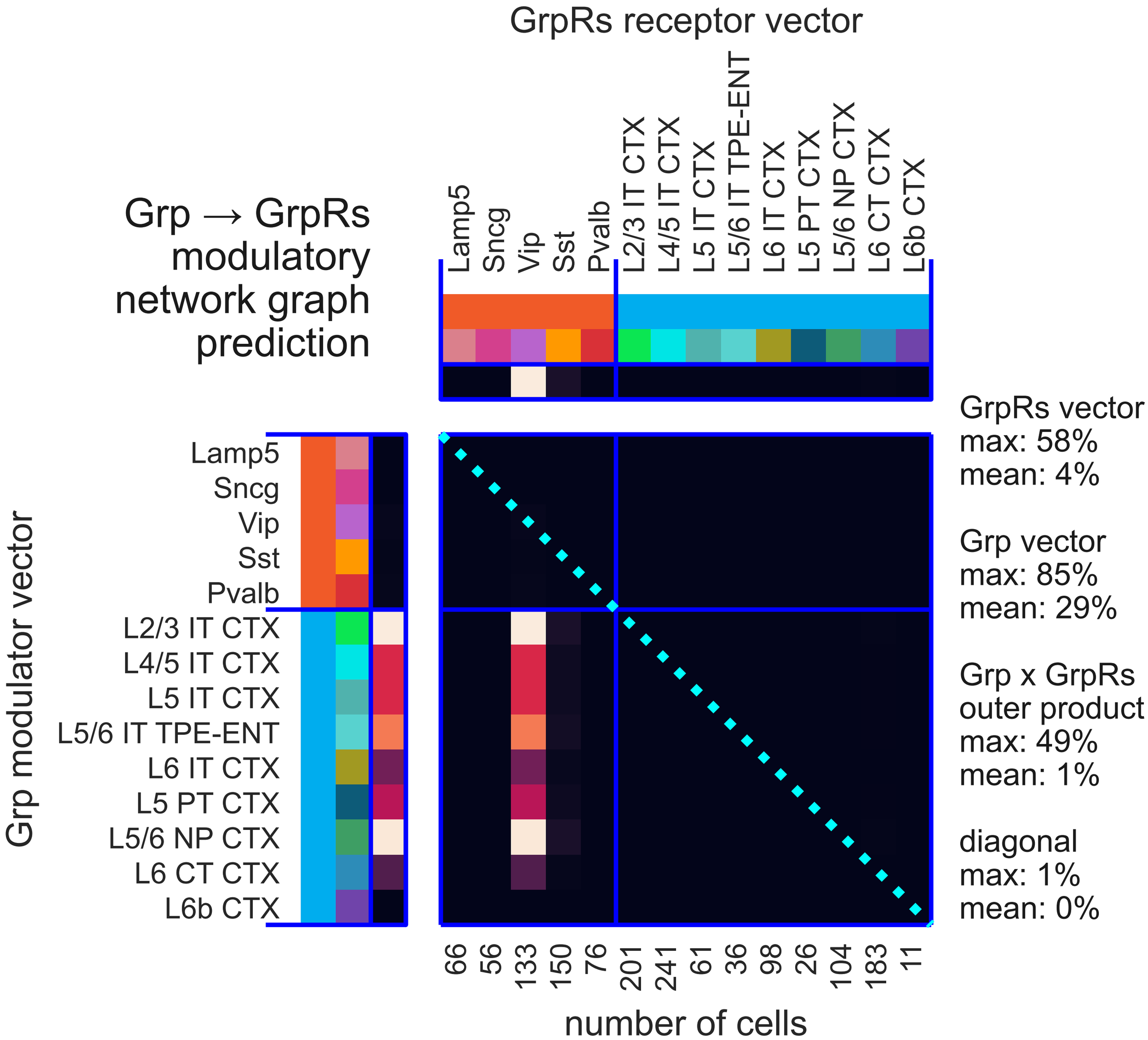



Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
GrpRs receptor vector
Grp → GrpRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Grp modulator vector
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells
GrpRs vector
max: 64%
mean: 6%
Grp vector
max: 66%
mean: 10%
Grp x GrpRs
outer product
max: 42%
mean: 1%
diagonal
max: 0%
mean: 0%

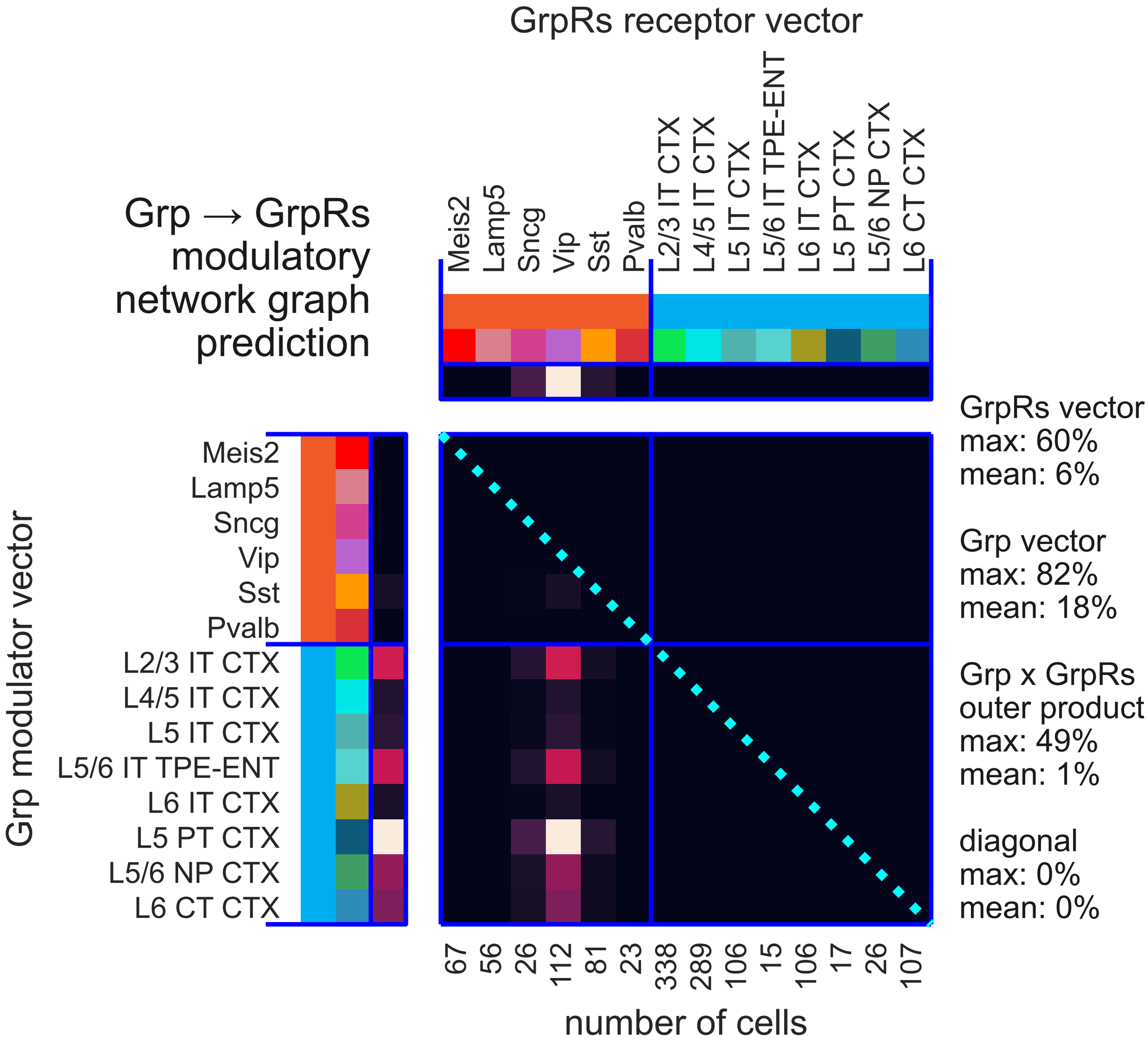
Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



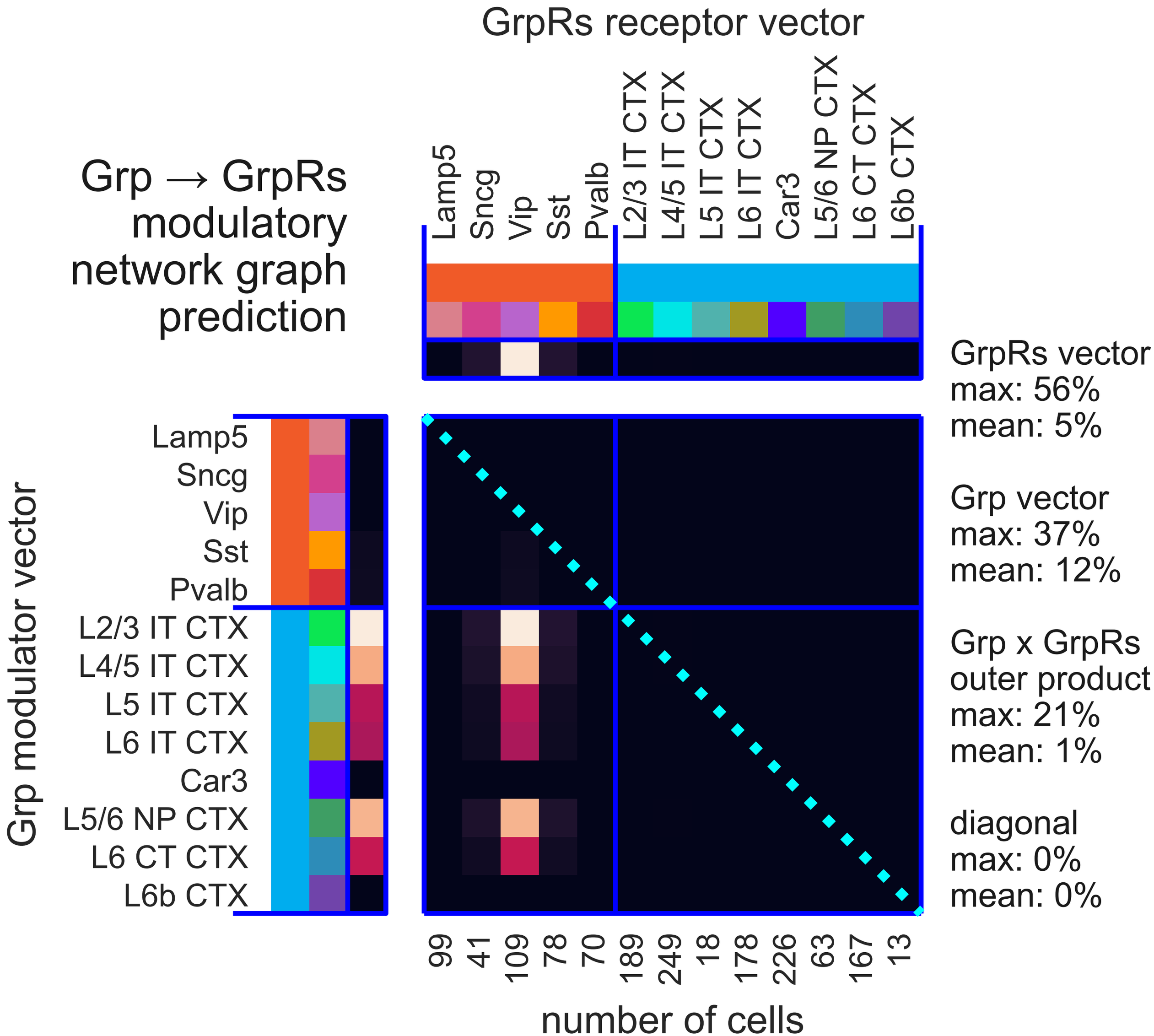
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)



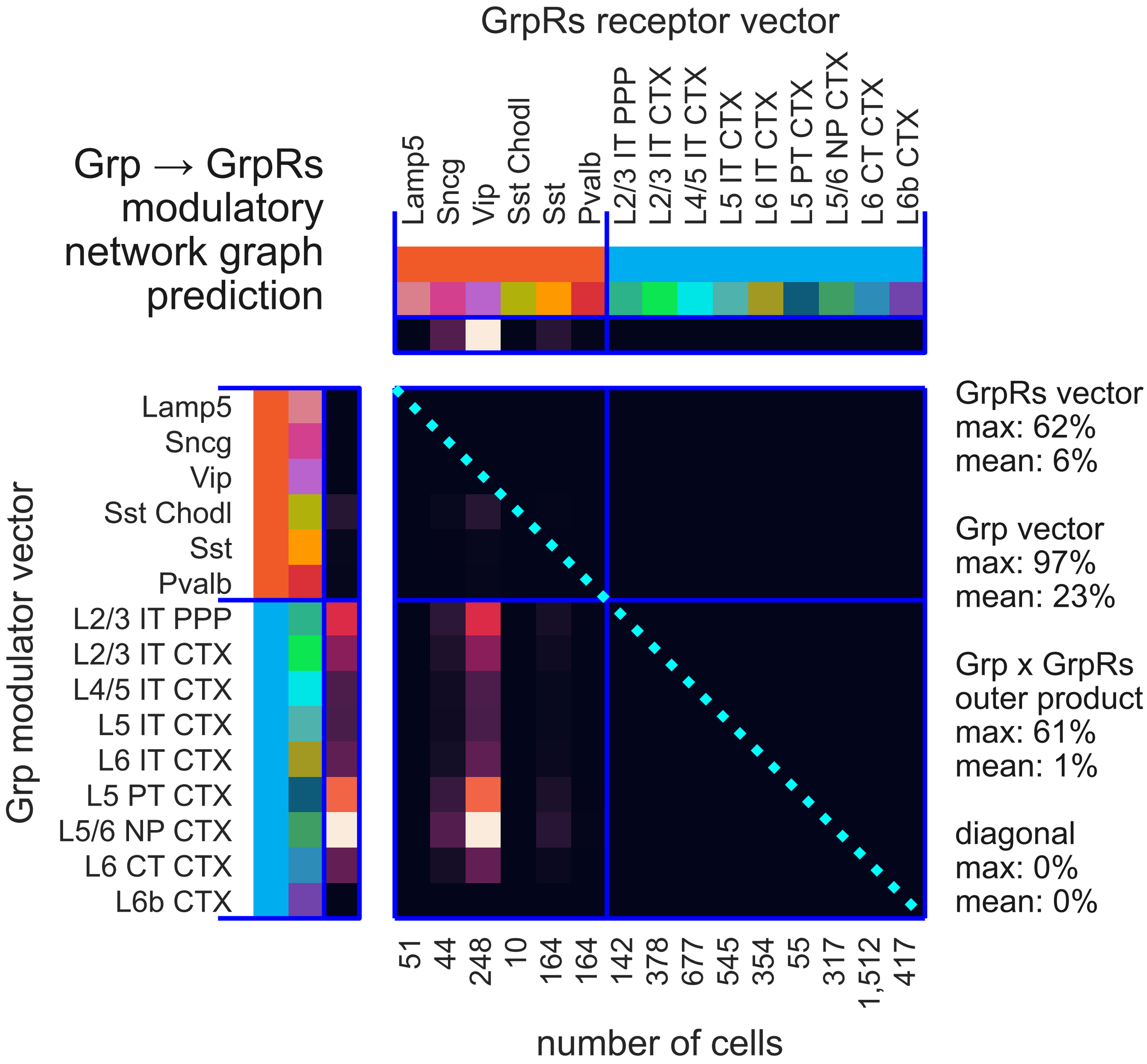
Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

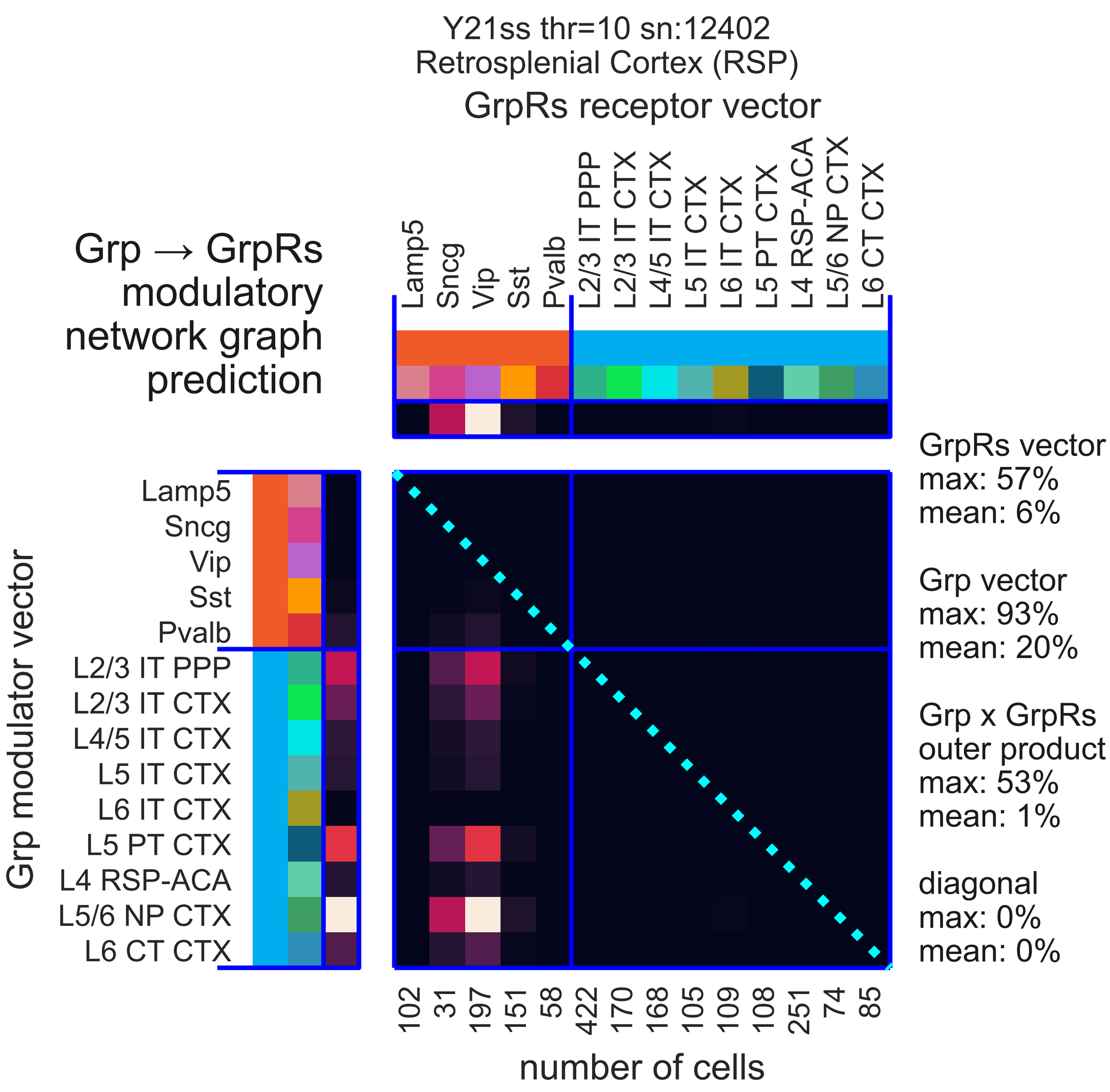


Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

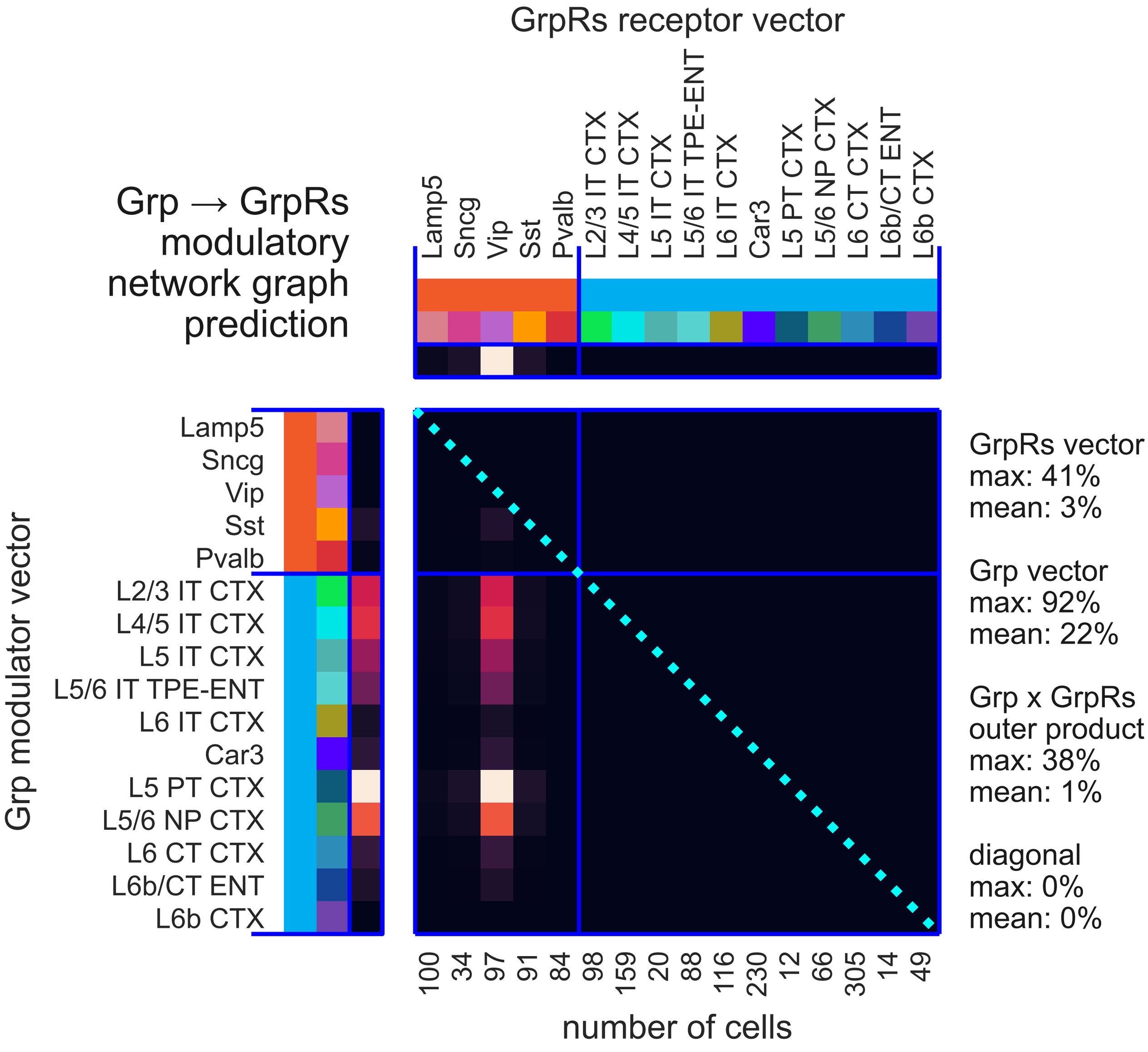


Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

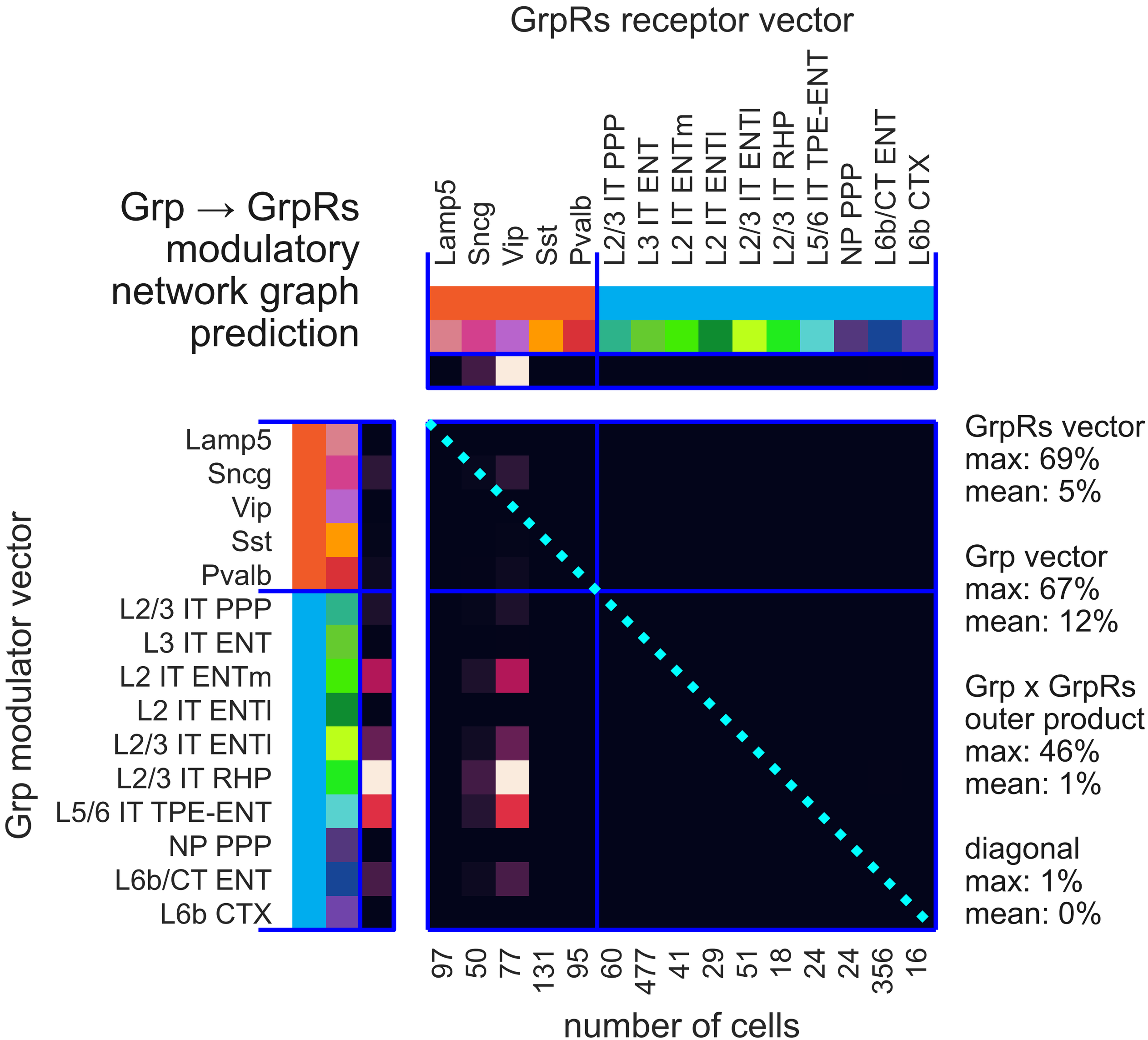


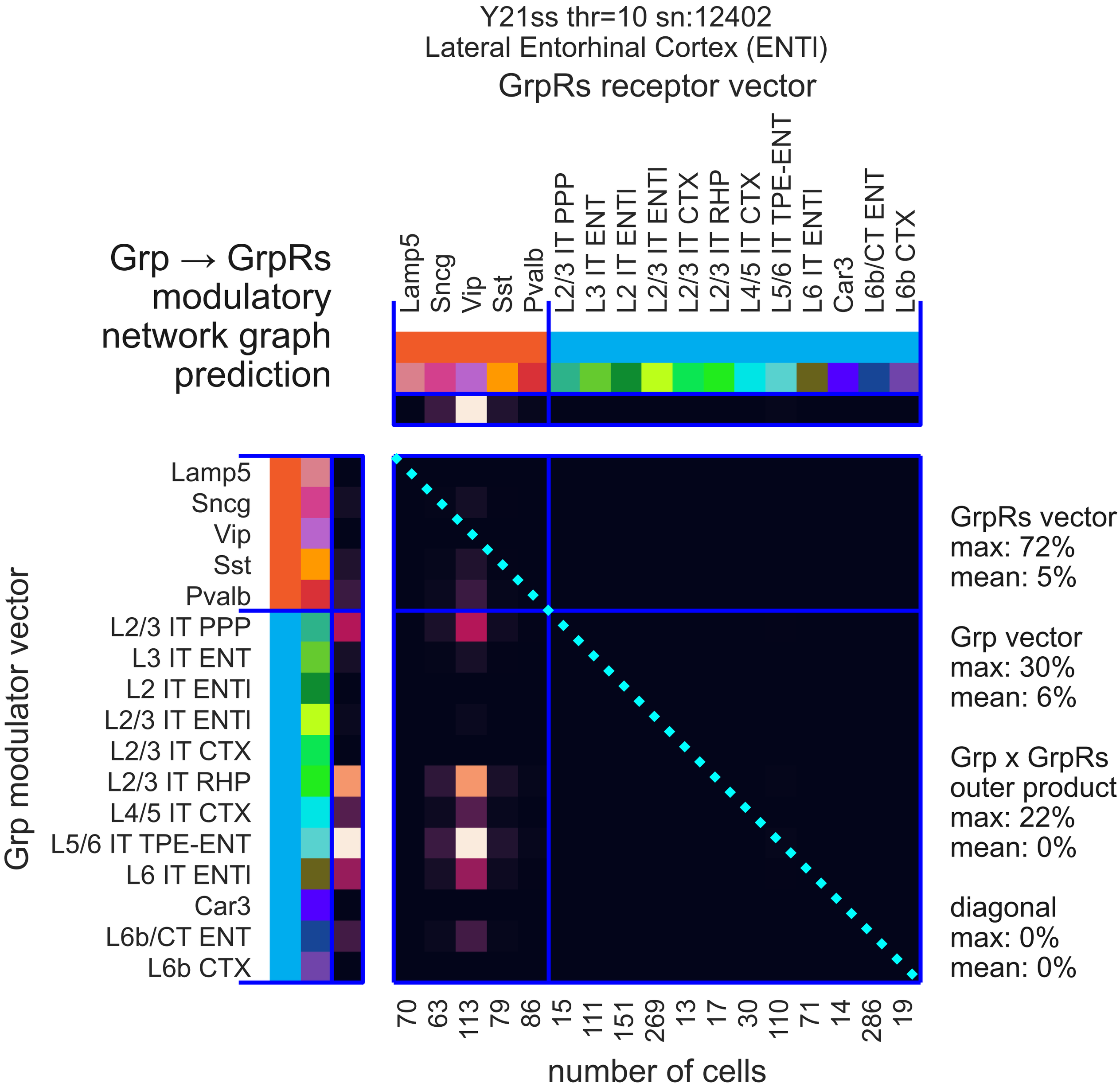

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
GrpRs receptor vector
Grp → GrpRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Grp modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
GrpRs vector
max: 57%
mean: 6%
Grp vector
max: 93%
mean: 20%
Grp x GrpRs
outer product
max: 53%
mean: 1%
diagonal
max: 0%
mean: 0%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

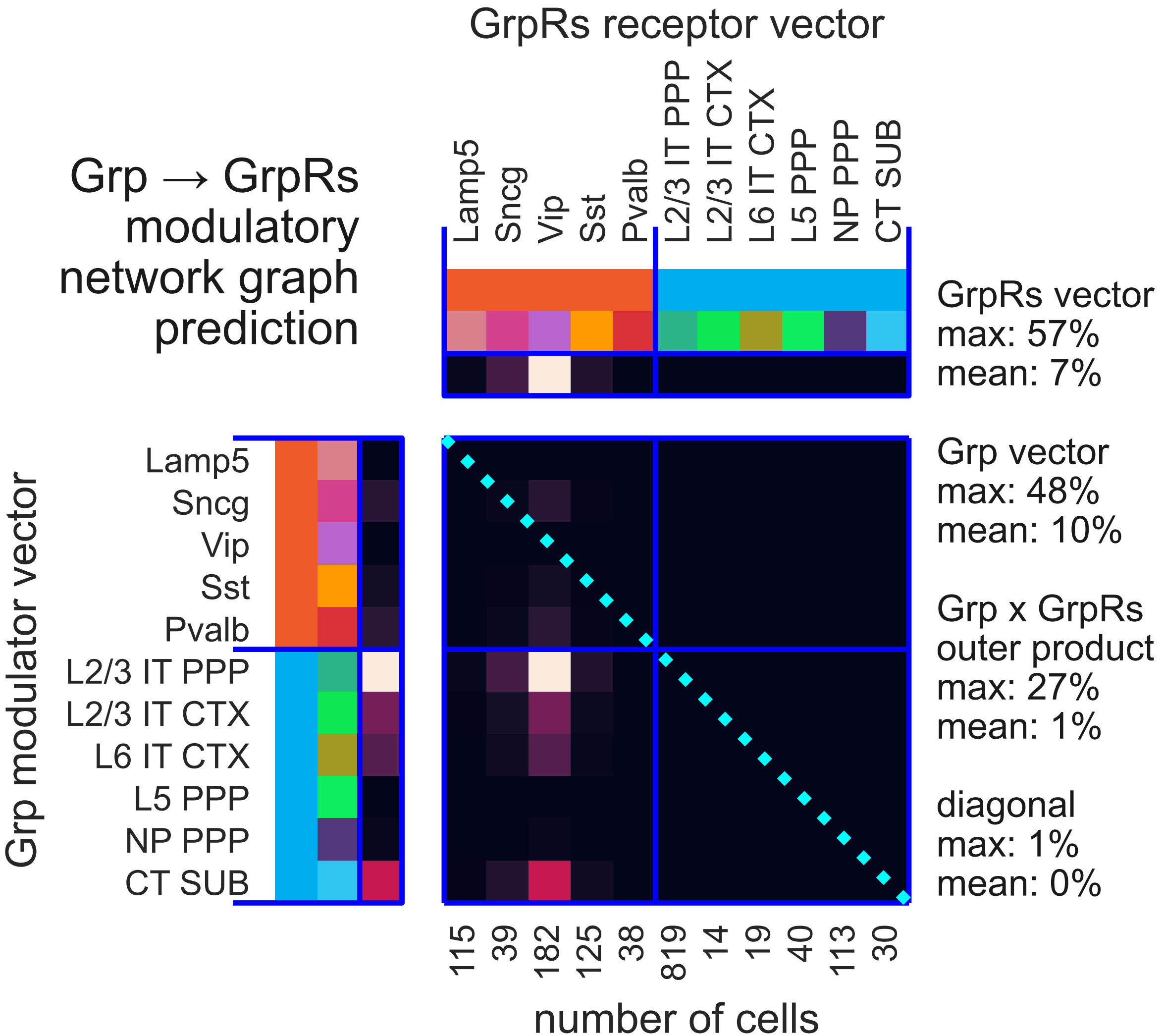


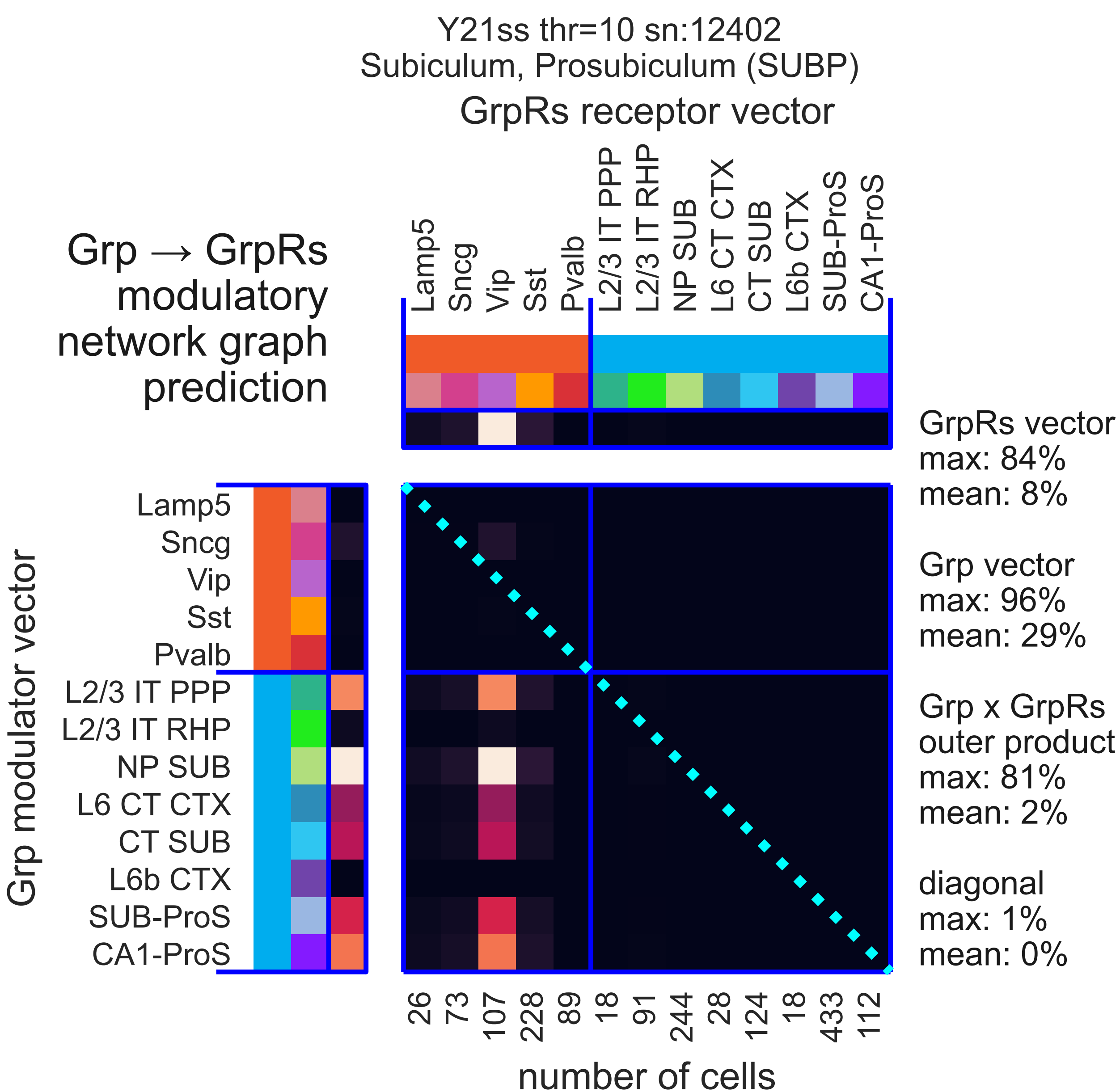
Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)



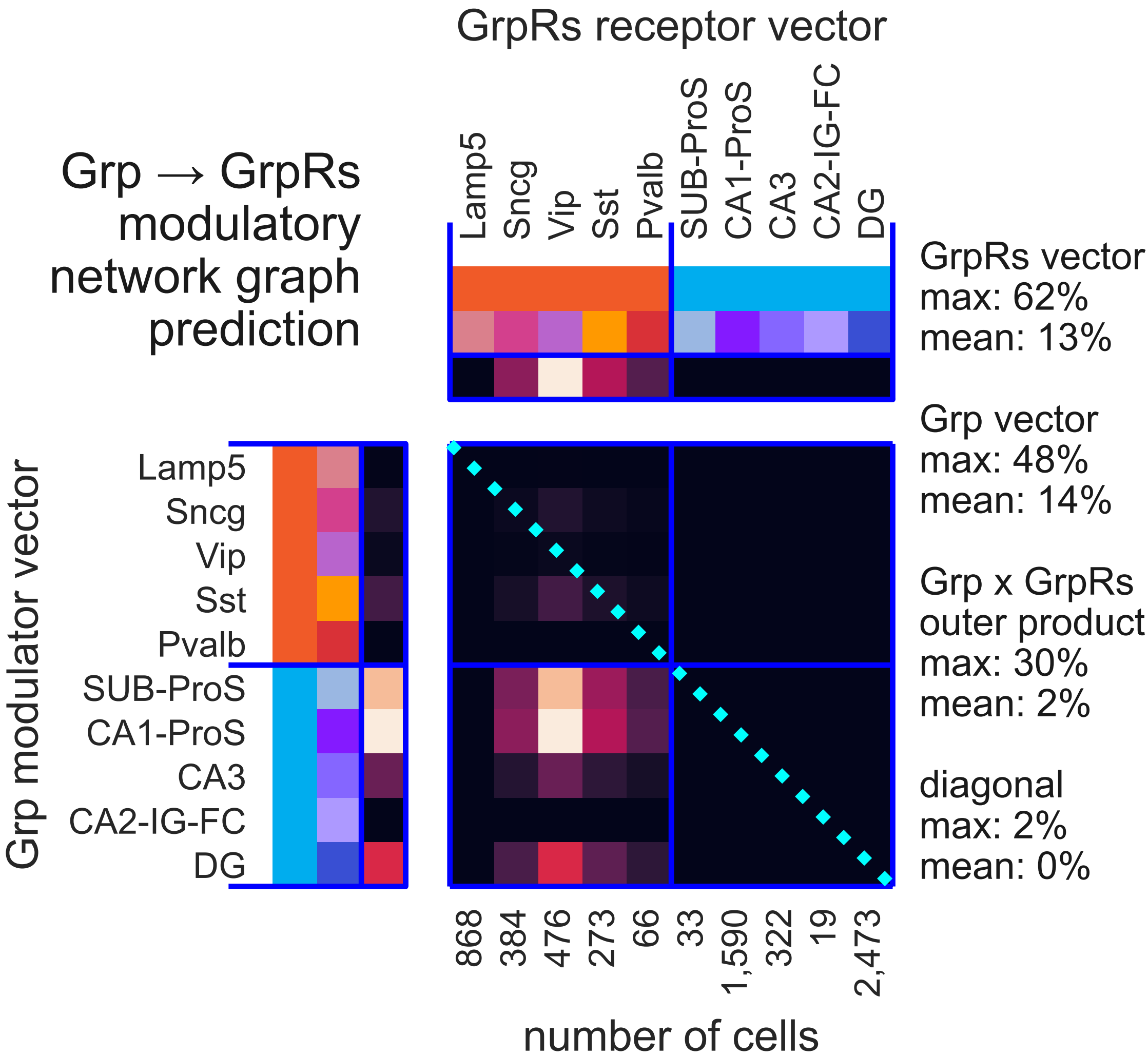

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
GrpRs receptor vector
Grp → GrpRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Grp modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
GrpRs vector
max: 72%
mean: 5%
Grp vector
max: 30%
mean: 6%
Grp x GrpRs
outer product
max: 22%
mean: 0%
diagonal
max: 0%
mean: 0%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

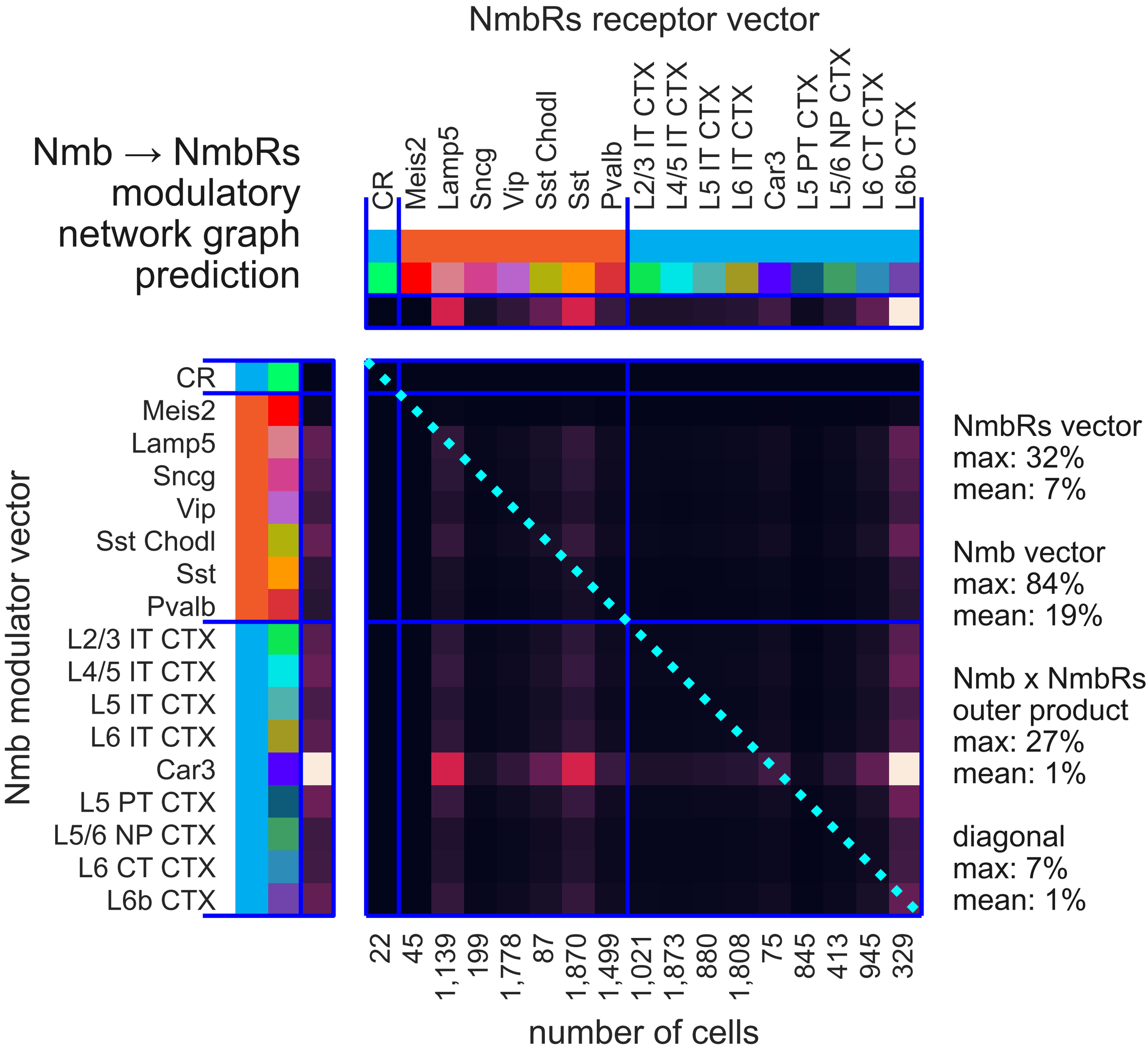



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)
GrpRs receptor vector
Grp → GrpRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT RHP
NP SUB
L6 CT CTX
CT SUB
L6b CTX
SUB-ProS
CA1-ProS
GrpRs vector
max: 84%
mean: 8%
Grp vector
max: 96%
mean: 29%
Grp x GrpRs
outer product
max: 81%
mean: 2%
diagonal
max: 1%
mean: 0%
Grp modulator vector
26
73
107
228
89
18
91
244
28
124
18
433
112
number of cells

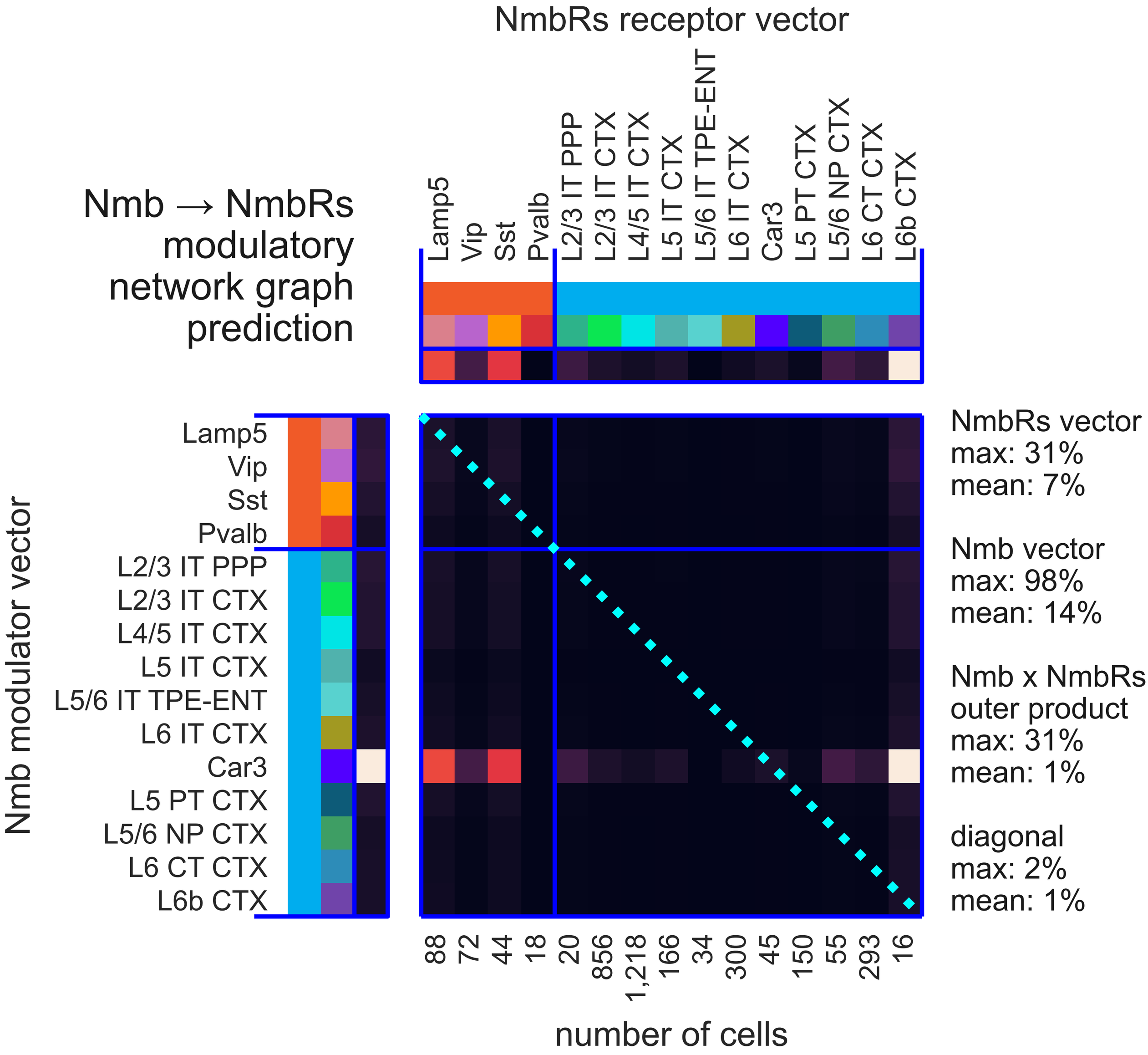
Y21ss thr=10 sn:12402
Hippocampus (HIP)



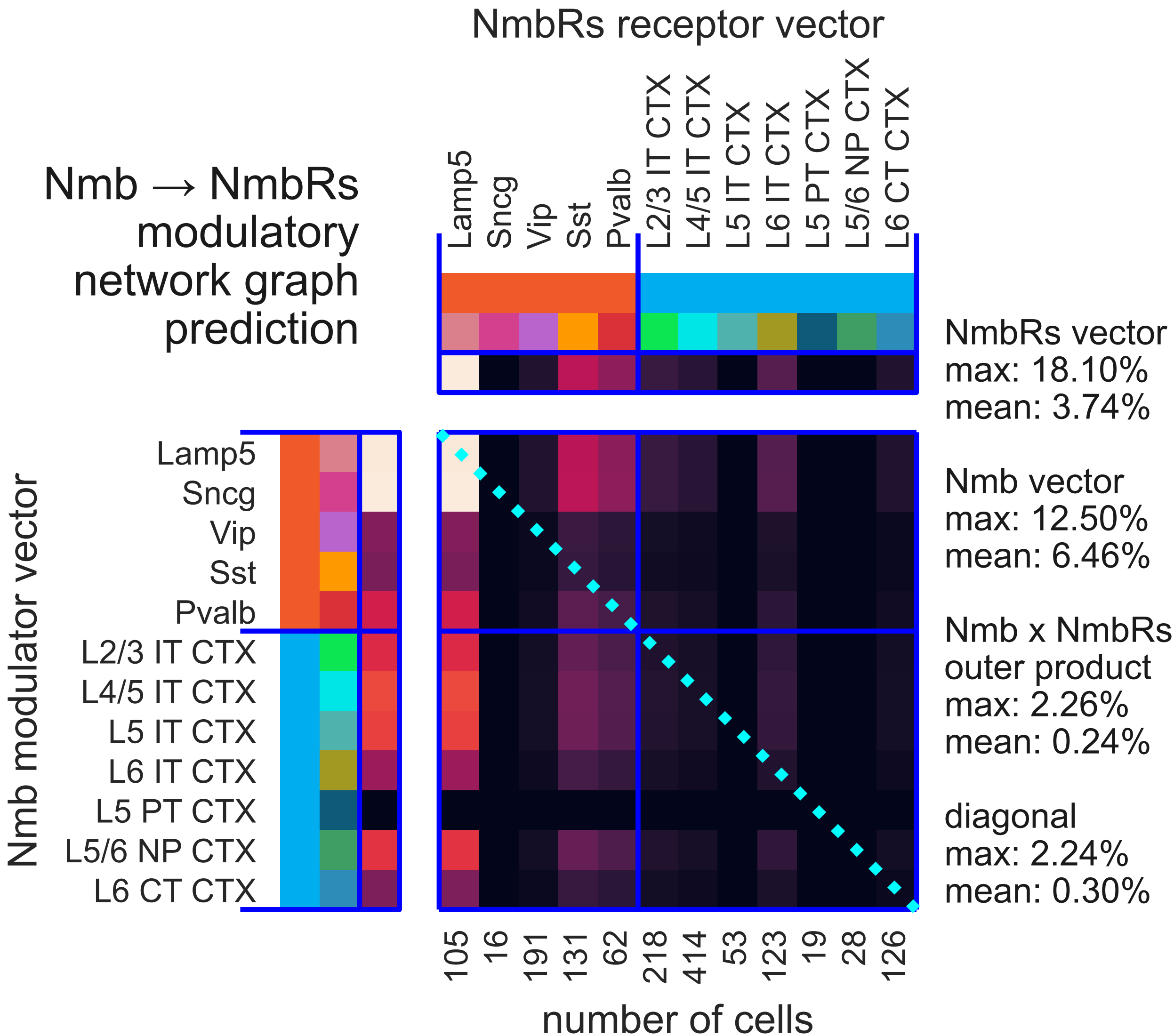
Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



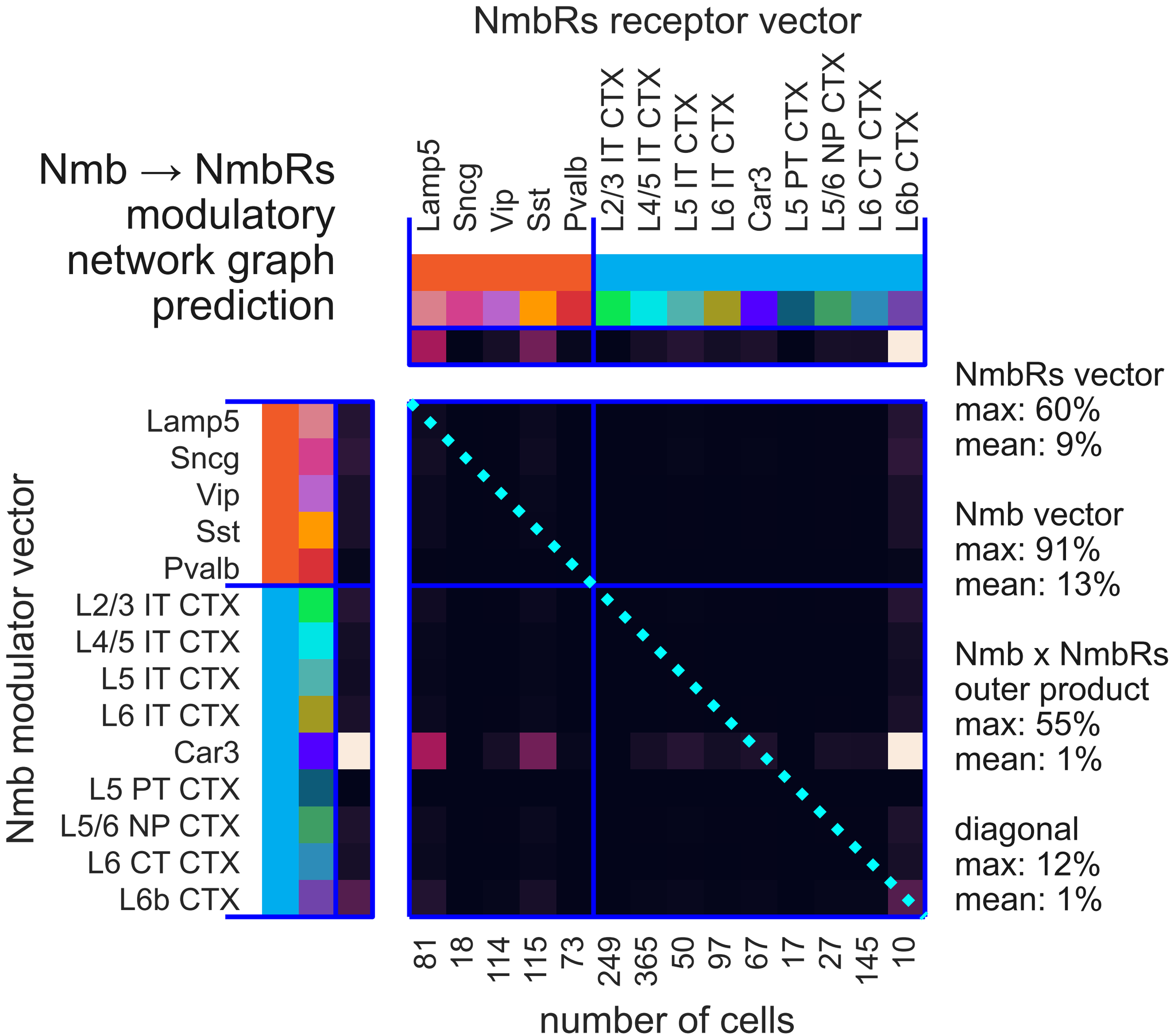
Y21ss thr=10 sn:12402
Visual Cortex (VIS)



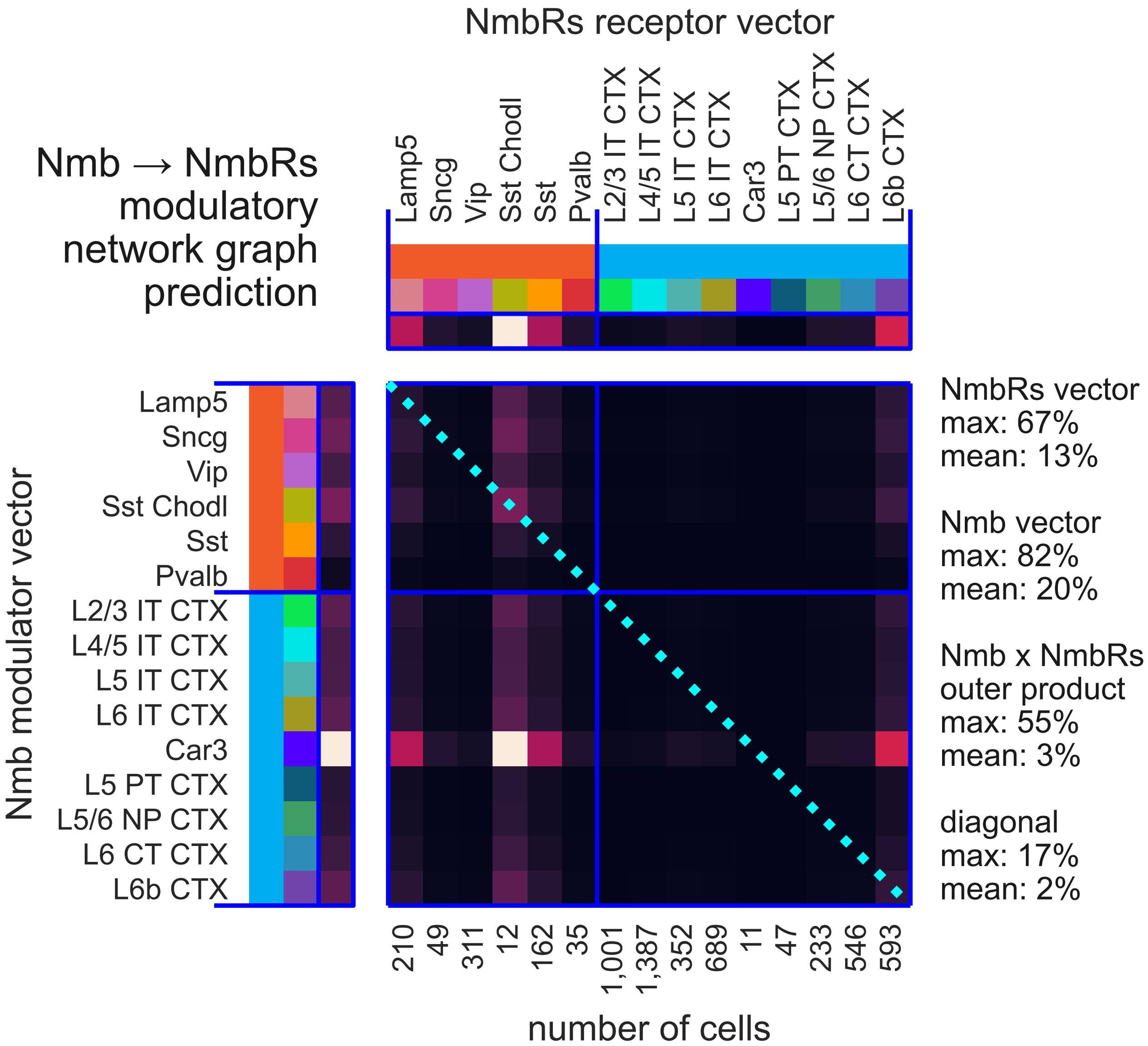
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



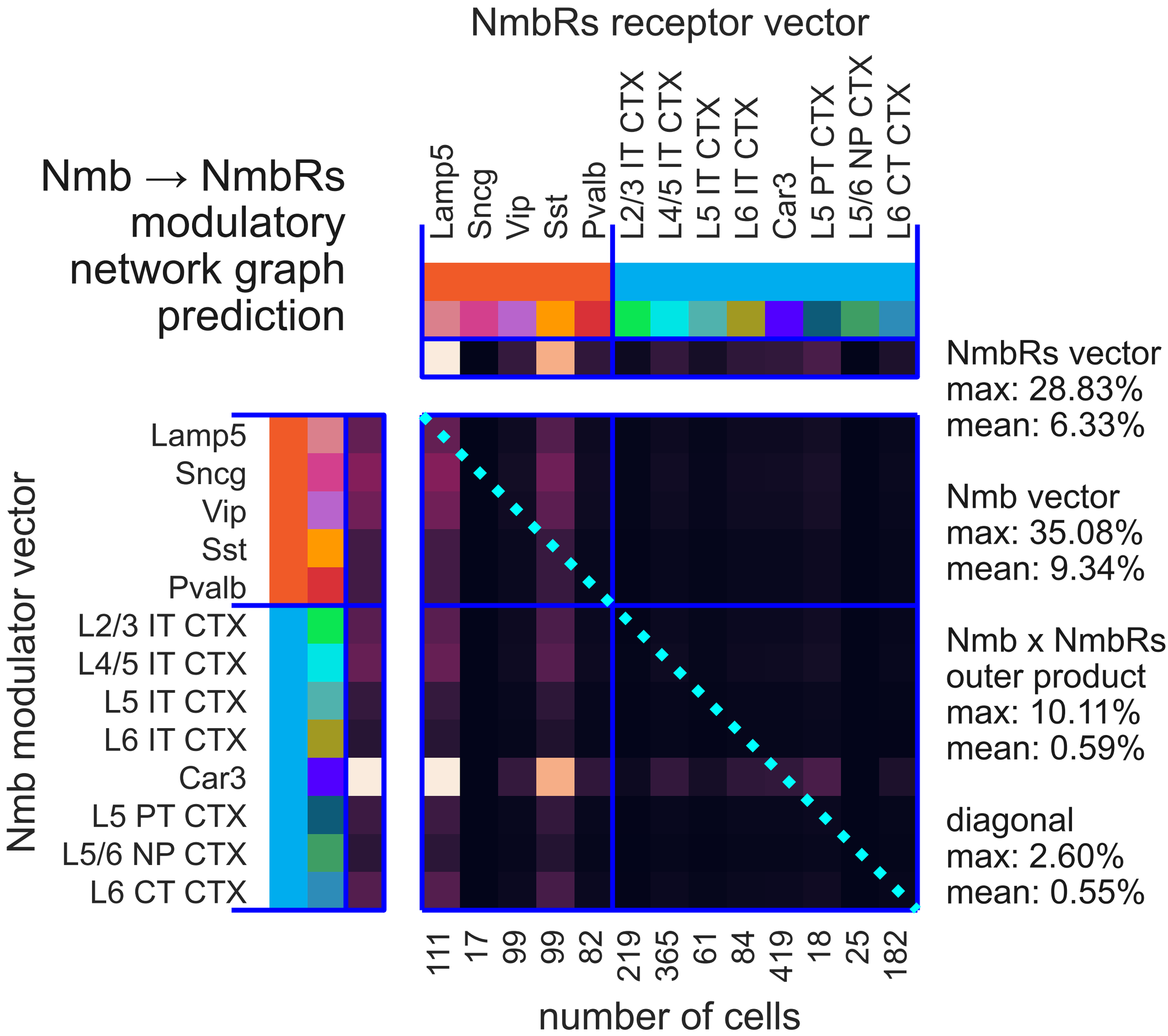
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)



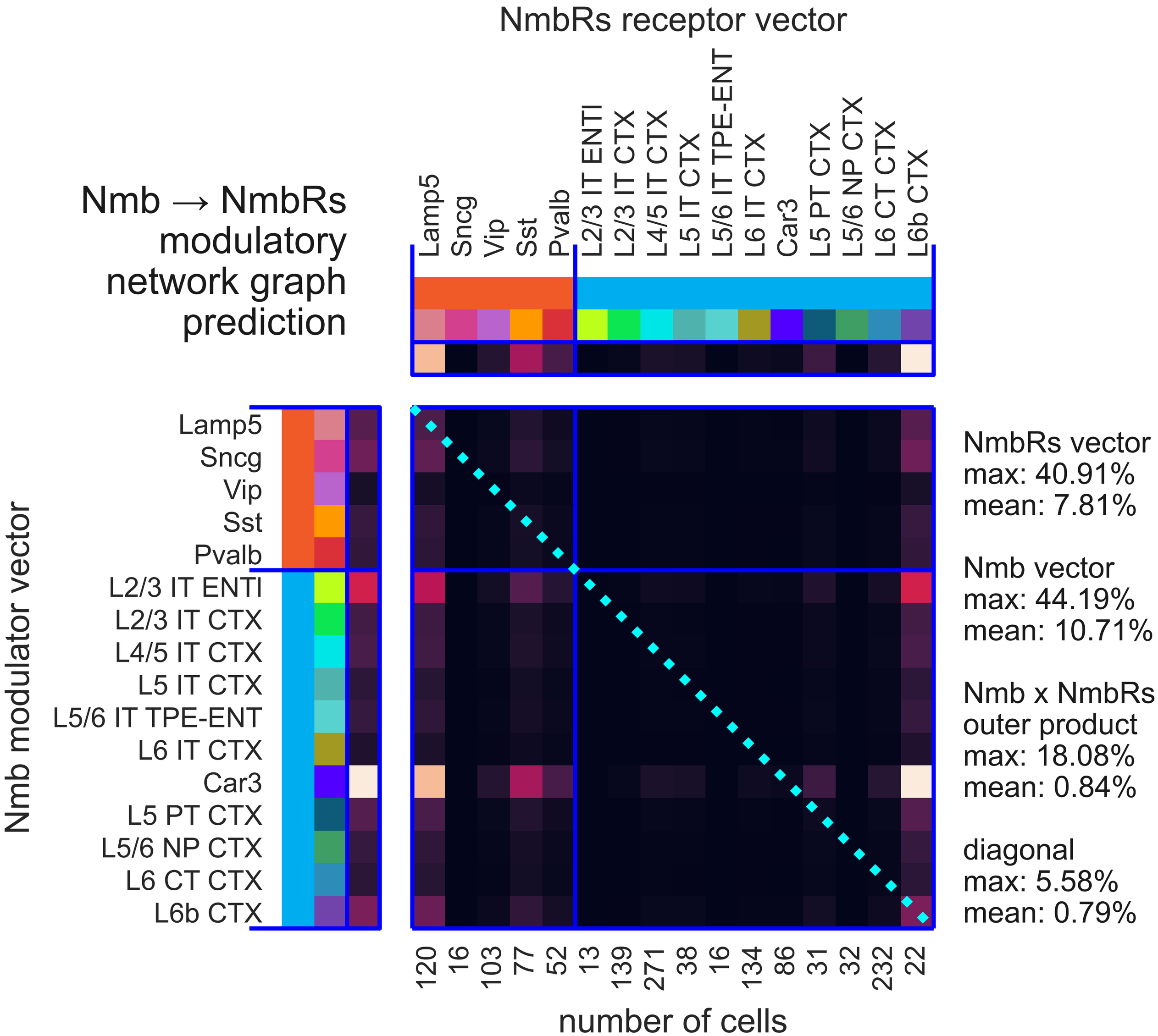
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

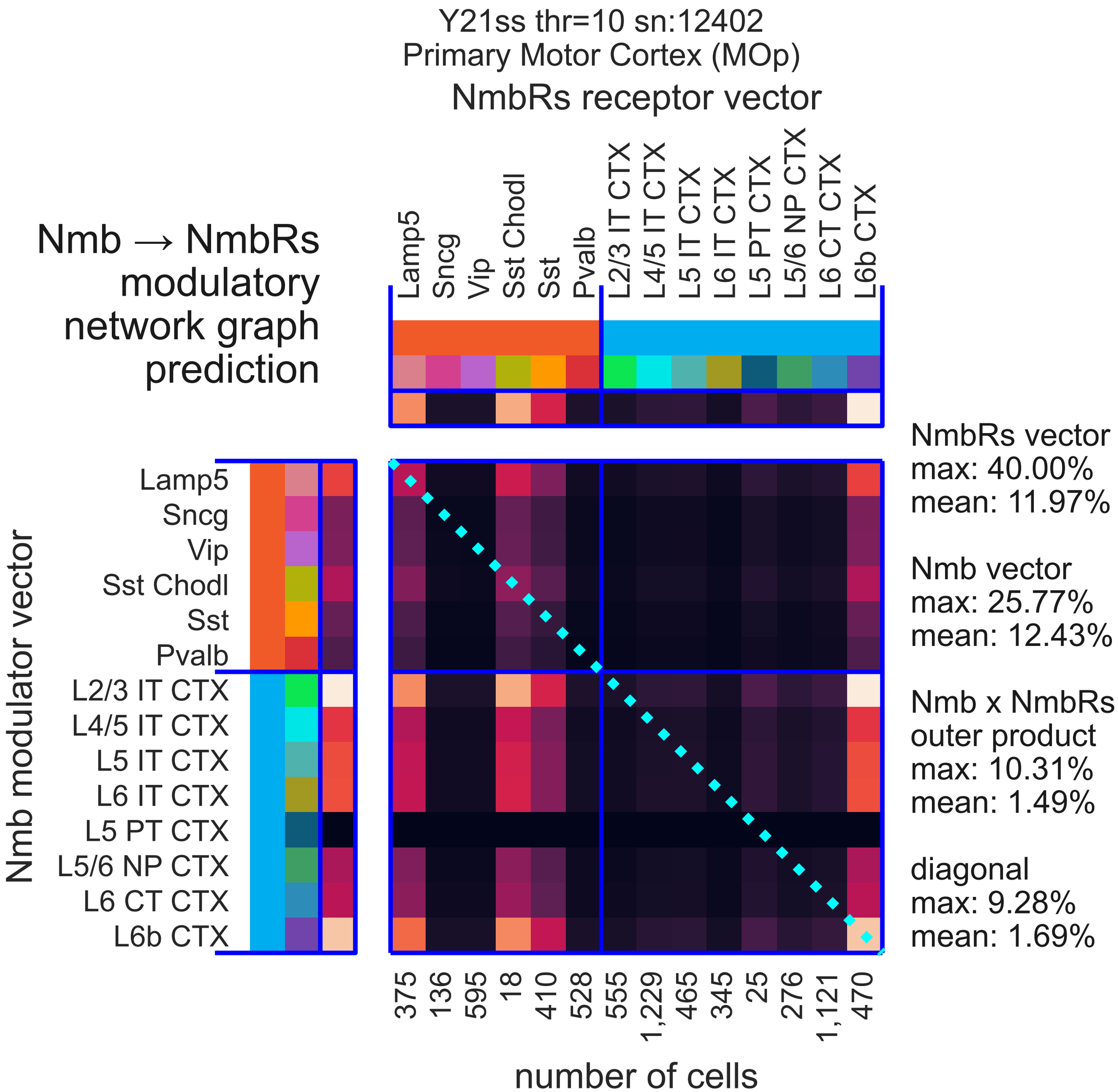


Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)

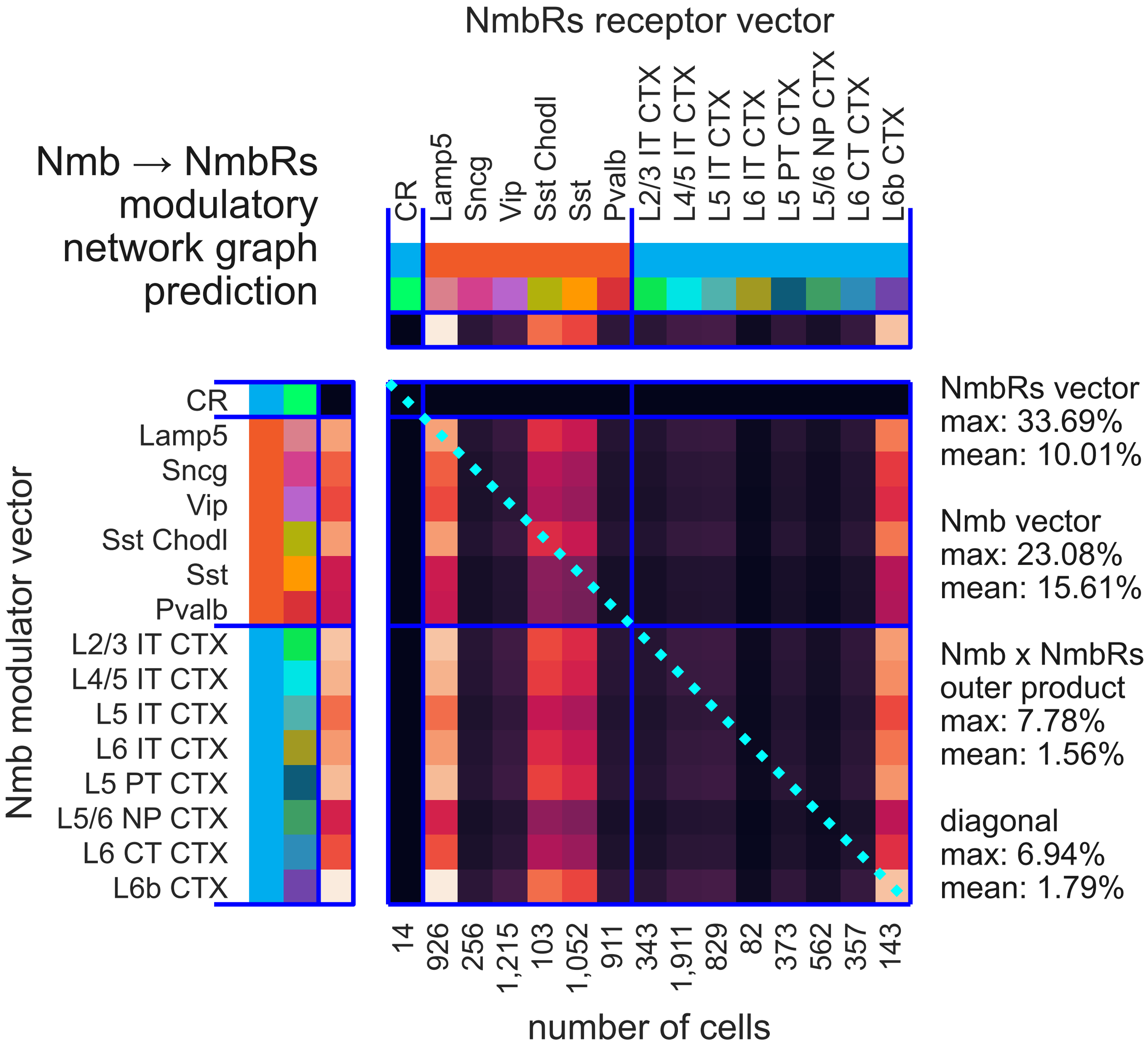


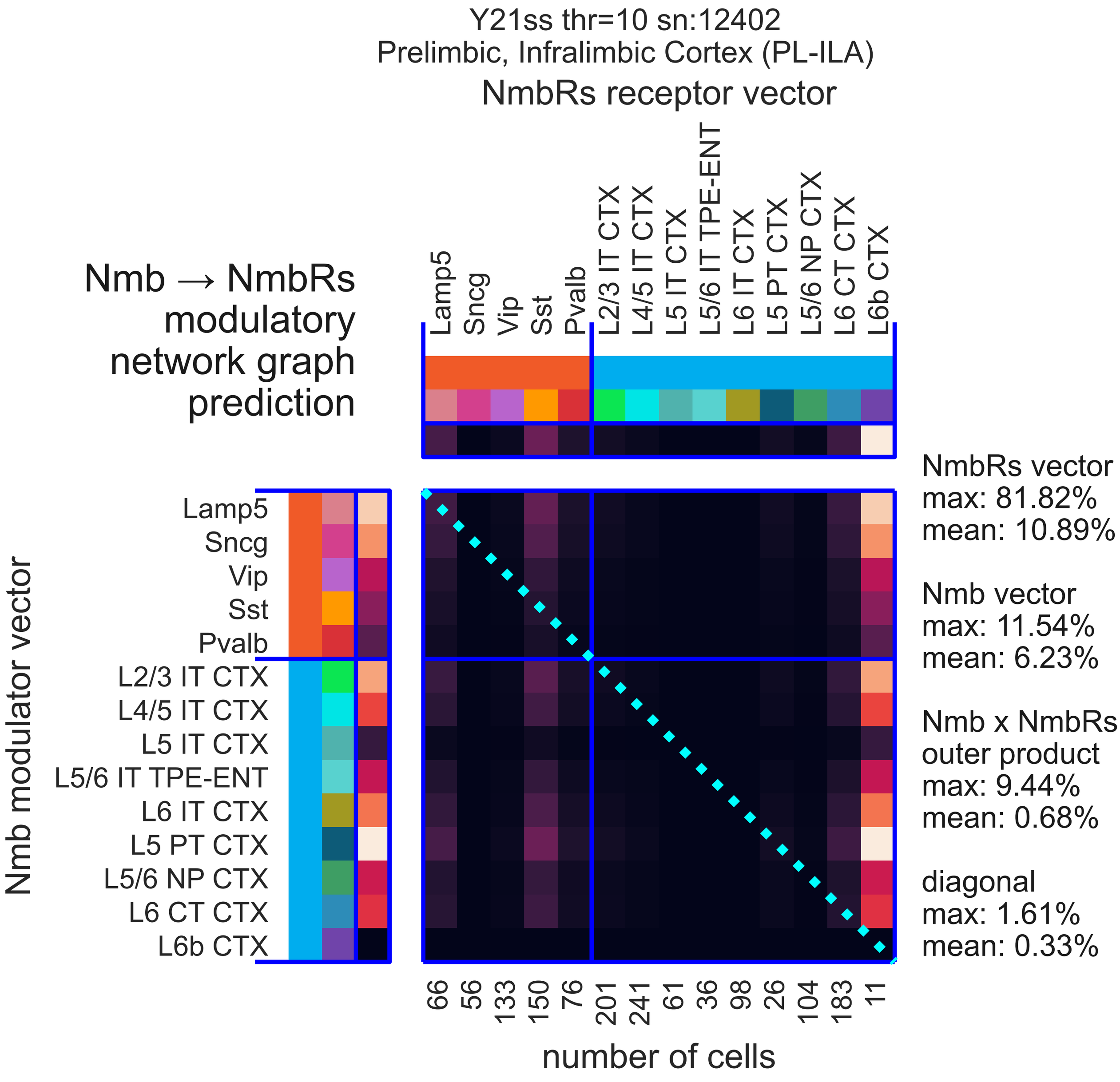
Y21ss thr=10 sn:12402
Gustatory Cortex (GU)



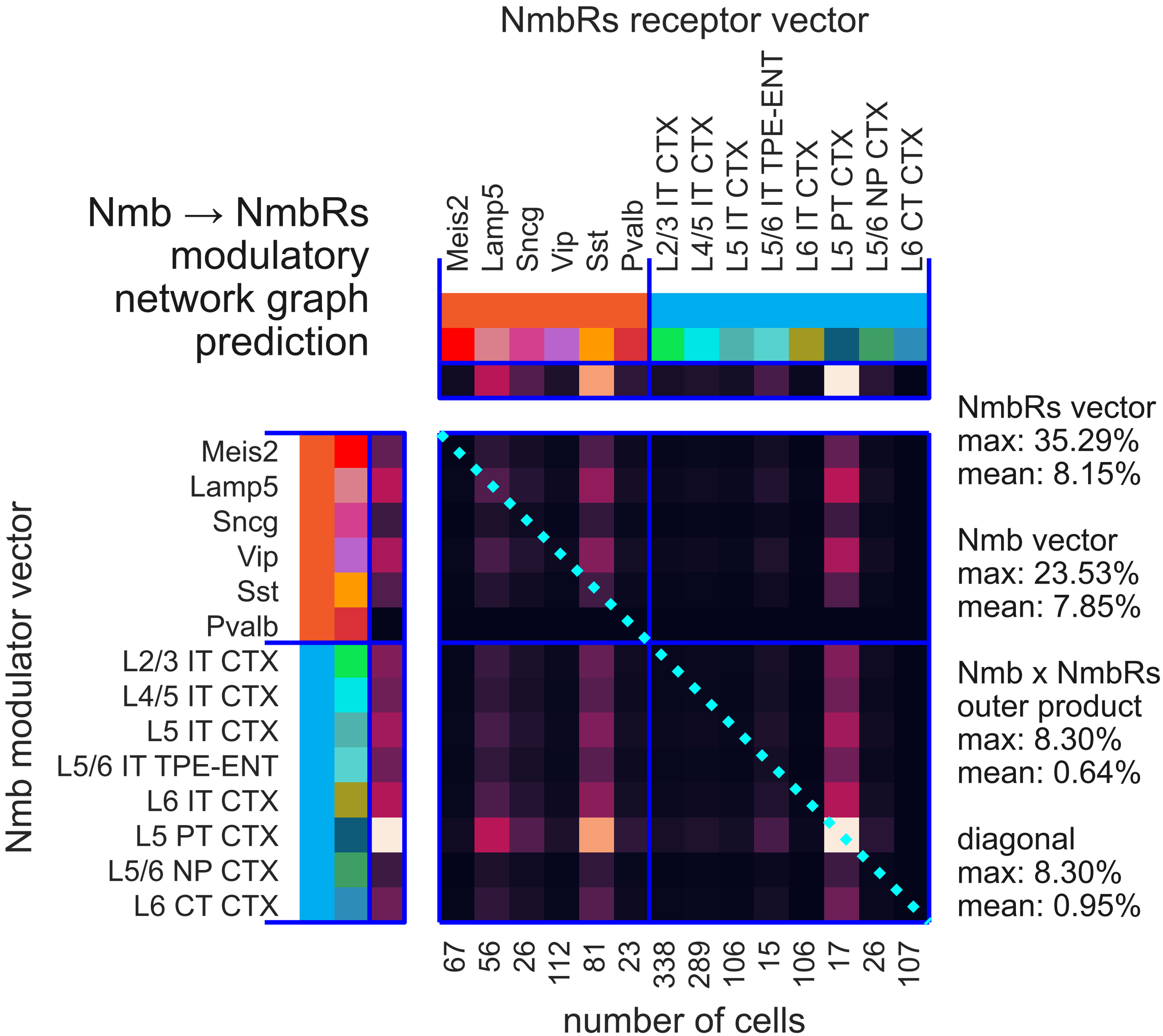

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
NmbRs receptor vector
Nmb → NmbRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Nmb modulator vector
NmbRs vector
max: 40.00%
mean: 11.97%
Nmb vector
max: 25.77%
mean: 12.43%
Nmb x NmbRs
outer product
max: 10.31%
mean: 1.49%
diagonal
max: 9.28%
mean: 1.69%
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

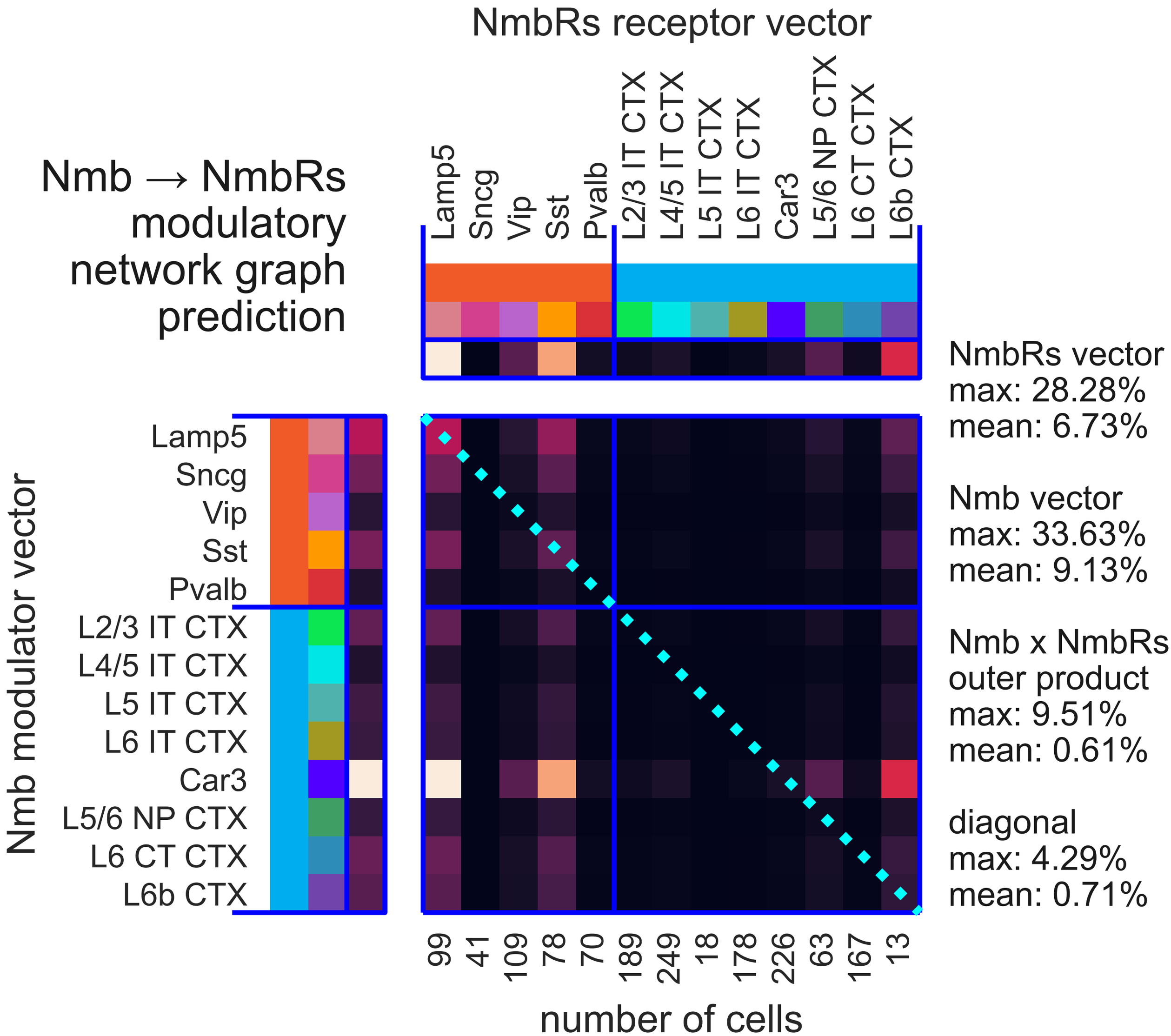



Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)
NmbRs receptor vector
Nmb → NmbRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Nmb modulator vector
NmbRs vector
max: 81.82%
mean: 10.89%
Nmb vector
max: 11.54%
mean: 6.23%
Nmb x NmbRs
outer product
max: 9.44%
mean: 0.68%
diagonal
max: 1.61%
mean: 0.33%
66
56
133
150
76
201
241
61
36
98
26
104
183
11
number of cells

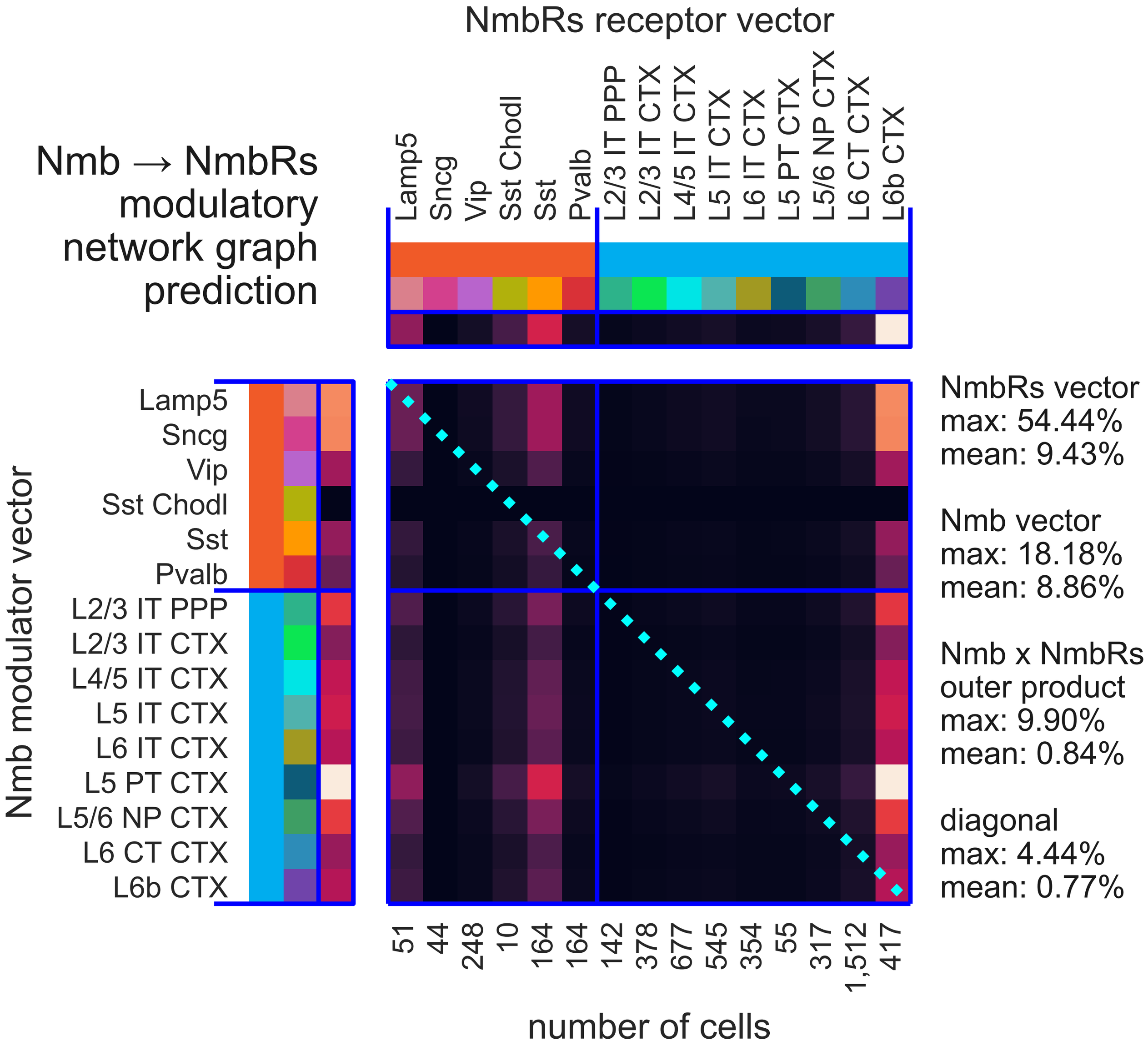
Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

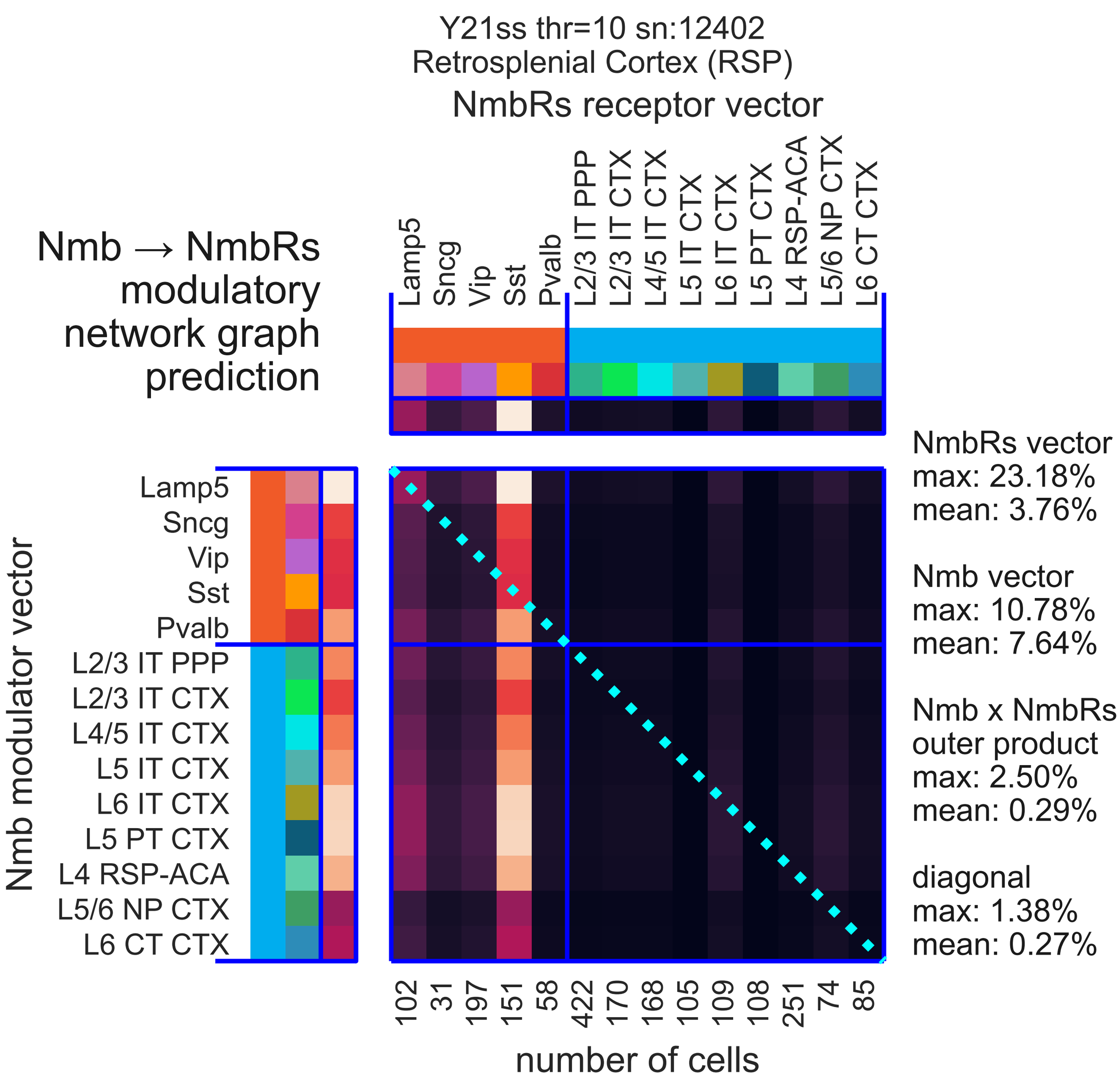


Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

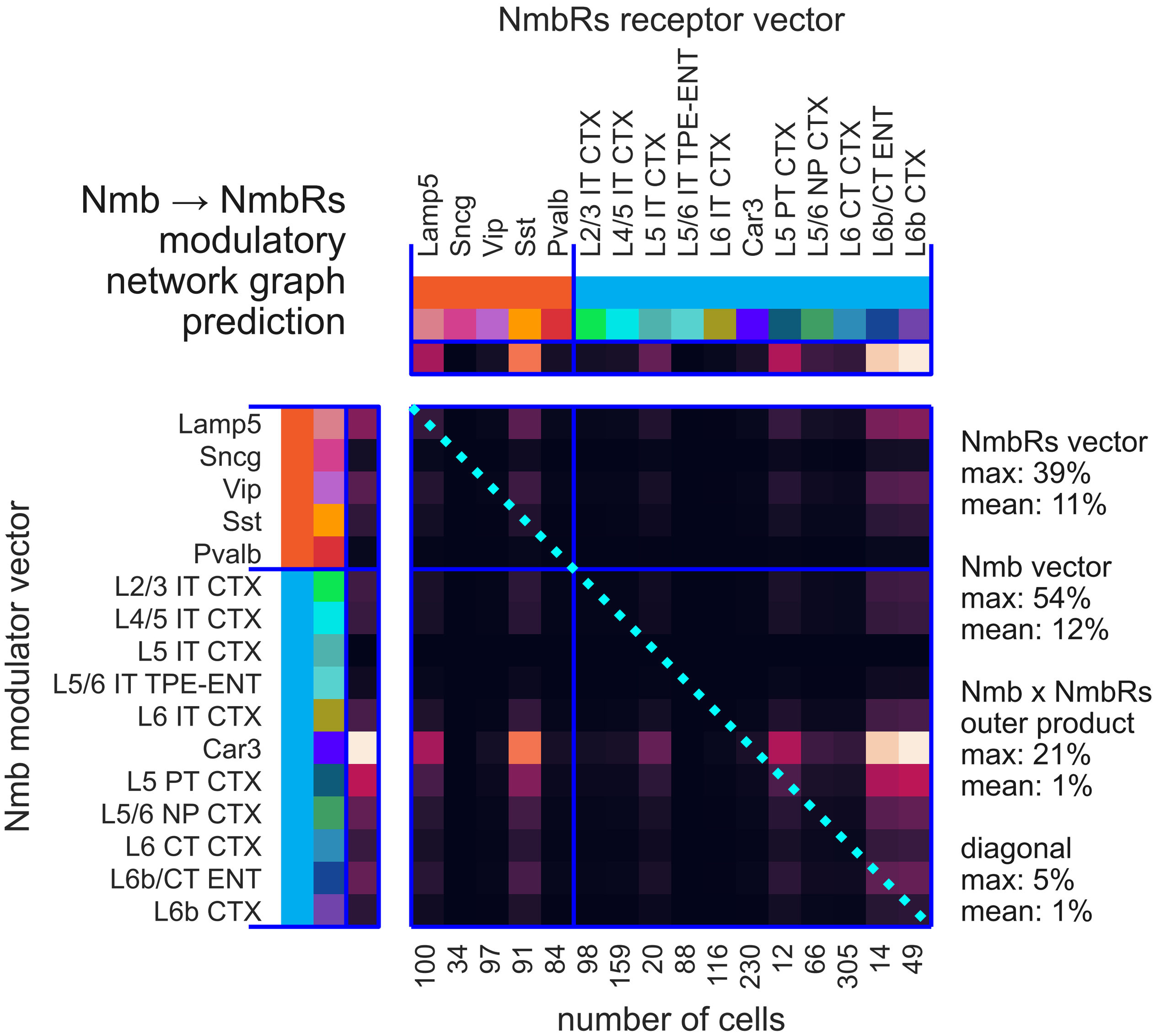


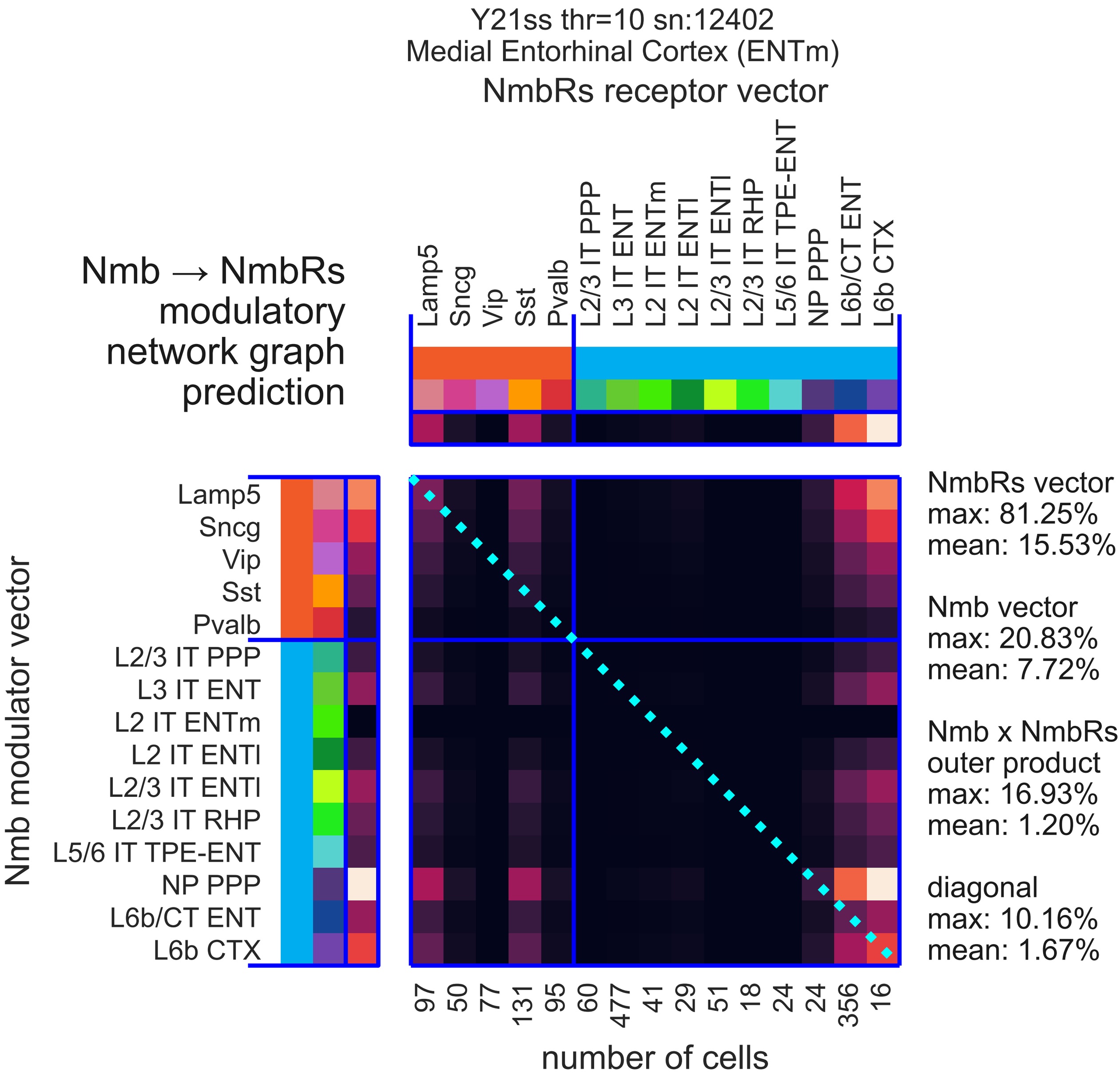
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

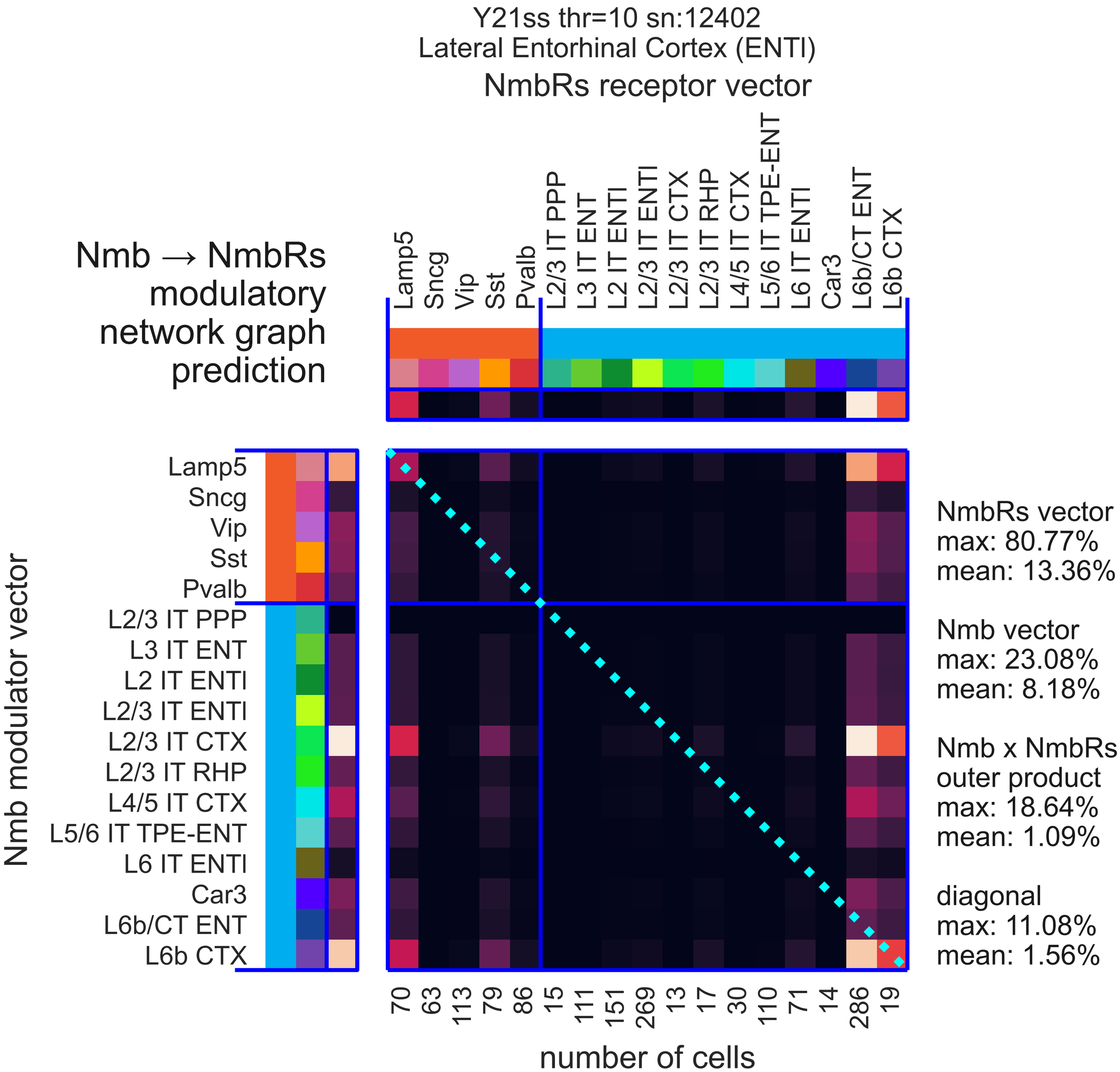



Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
NmbRs receptor vector
Nmb → NmbRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Nmb modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
NmbRs vector
max: 23.18%
mean: 3.76%
Nmb vector
max: 10.78%
mean: 7.64%
Nmb x NmbRs
outer product
max: 2.50%
mean: 0.29%
diagonal
max: 1.38%
mean: 0.27%

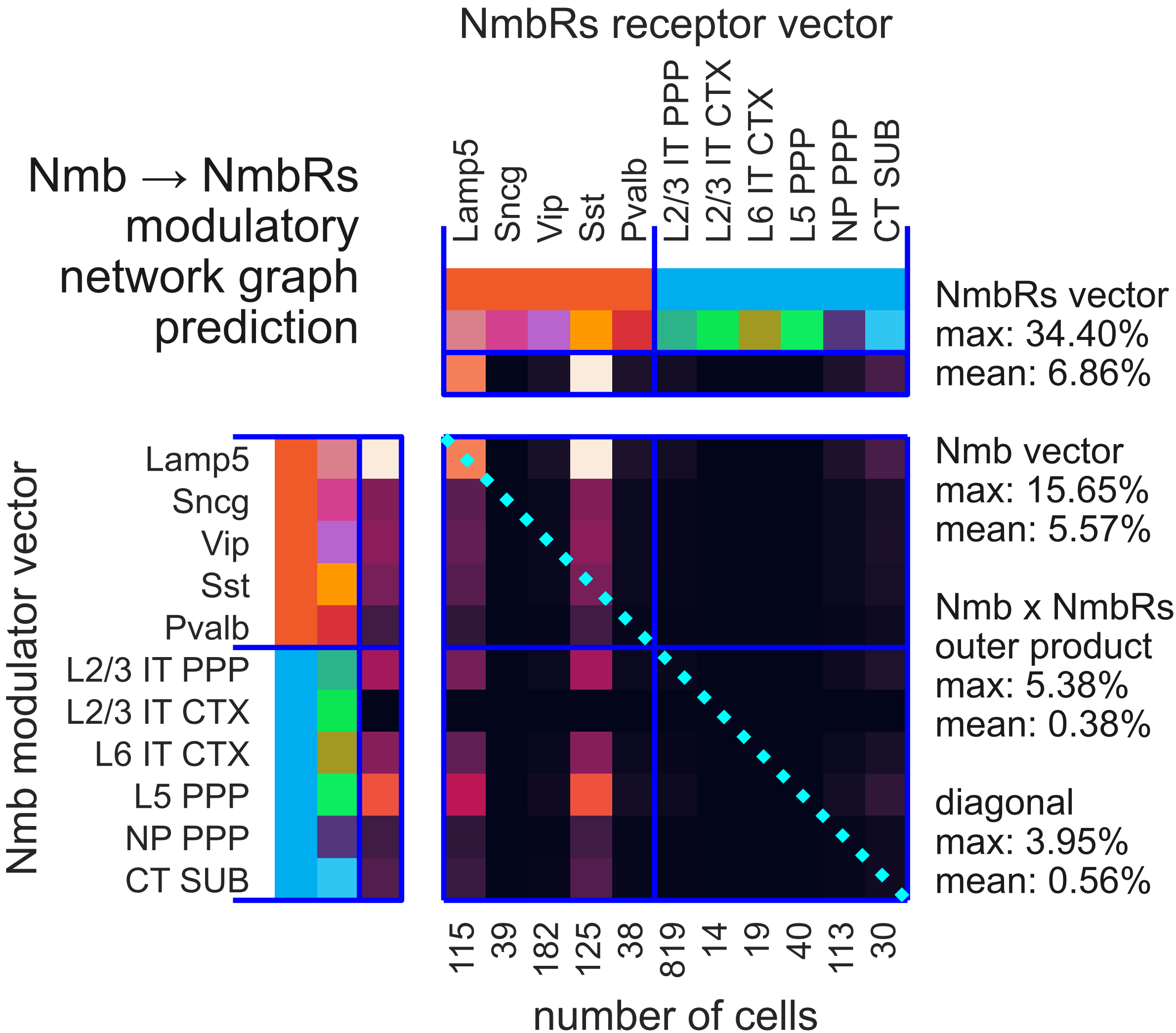
Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

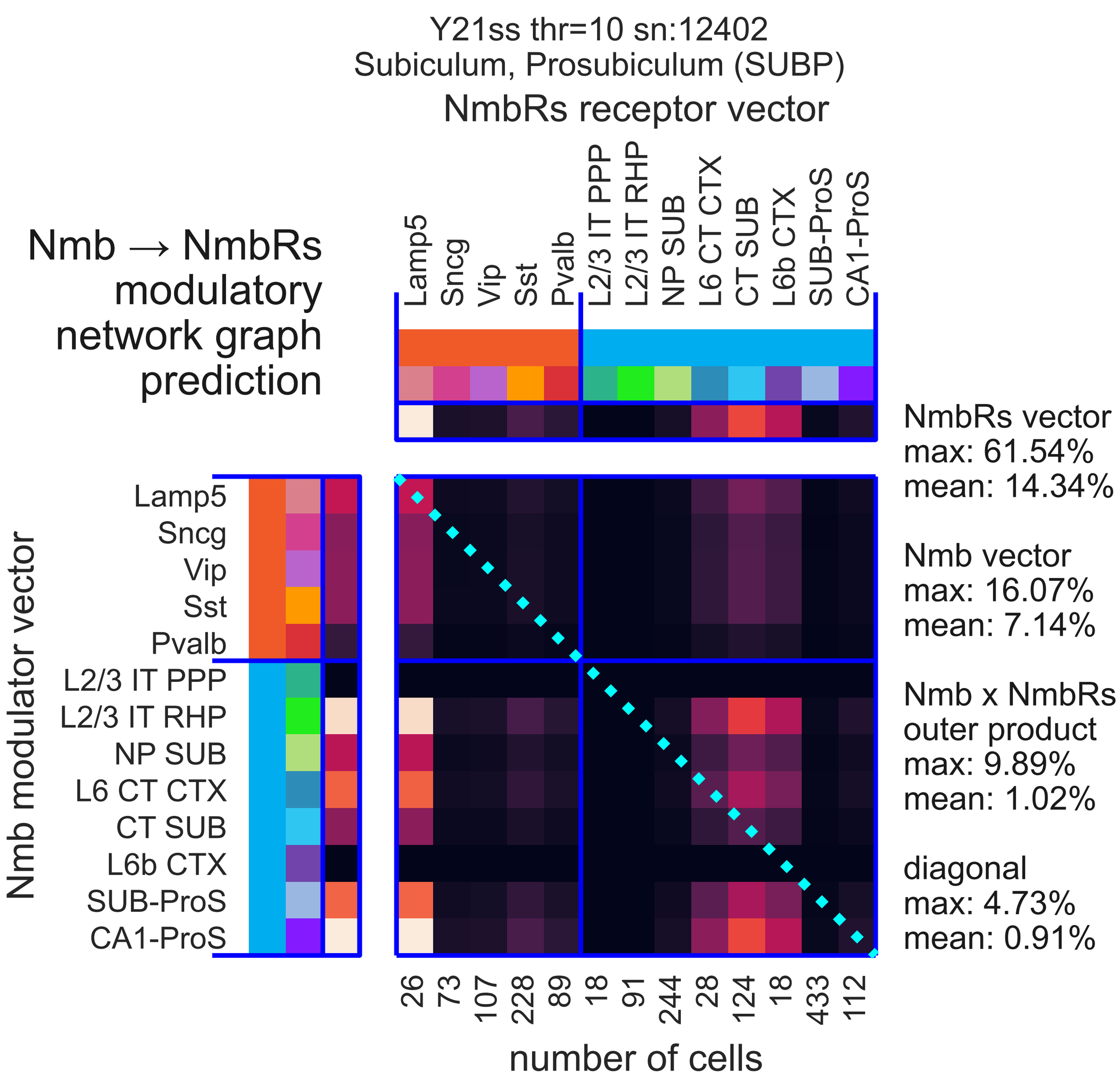



Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
NmbRs receptor vector
Nmb → NmbRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Nmb modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
NmbRs vector
max: 81.25%
mean: 15.53%
Nmb vector
max: 20.83%
mean: 7.72%
Nmb x NmbRs
outer product
max: 16.93%
mean: 1.20%
diagonal
max: 10.16%
mean: 1.67%

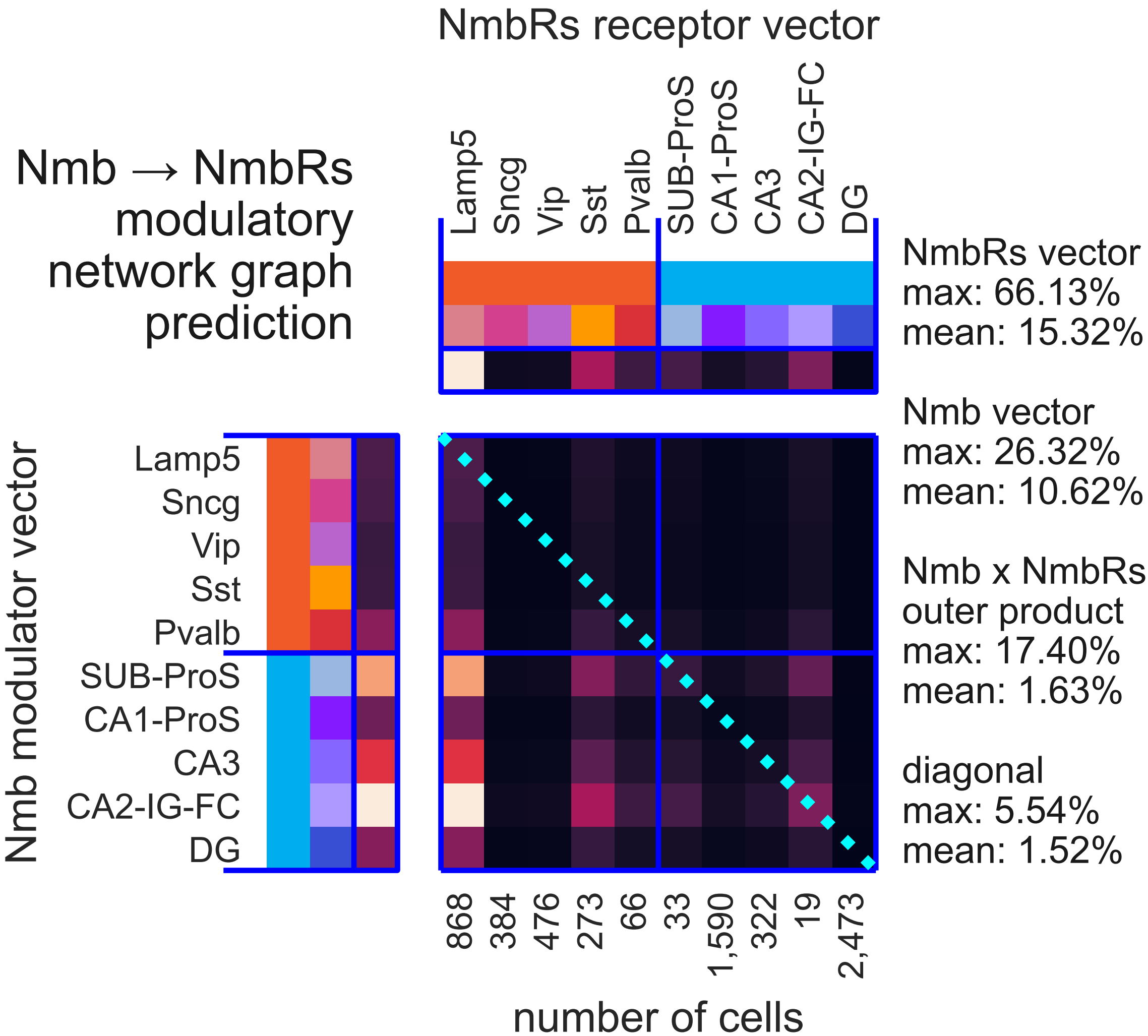

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
NmbRs receptor vector
Nmb → NmbRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Nmb modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
NmbRs vector
max: 80.77%
mean: 13.36%
Nmb vector
max: 23.08%
mean: 8.18%
Nmb x NmbRs
outer product
max: 18.64%
mean: 1.09%
diagonal
max: 11.08%
mean: 1.56%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

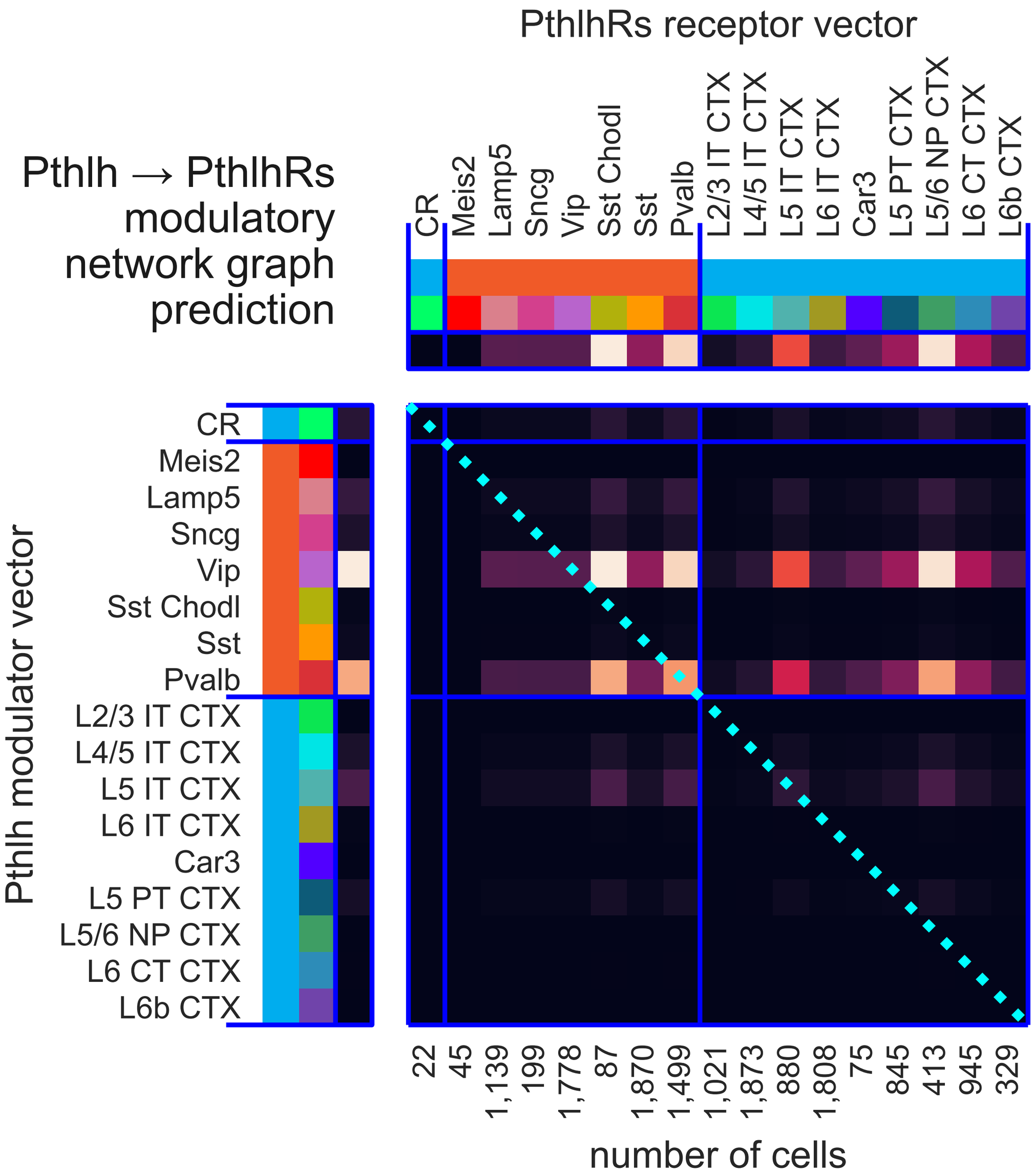



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)
NmbRs receptor vector
Nmb → NmbRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT RHP
NP SUB
L6 CT CTX
CT SUB
L6b CTX
SUB-ProS
CA1-ProS
NmbRs vector
max: 61.54%
mean: 14.34%
Nmb modulator vector
Nmb vector
max: 16.07%
mean: 7.14%
Nmb x NmbRs
outer product
max: 9.89%
mean: 1.02%
diagonal
max: 4.73%
mean: 0.91%
26
73
107
228
89
18
91
244
28
124
18
433
112
number of cells

Y21ss thr=10 sn:12402
Hippocampus (HIP)



Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



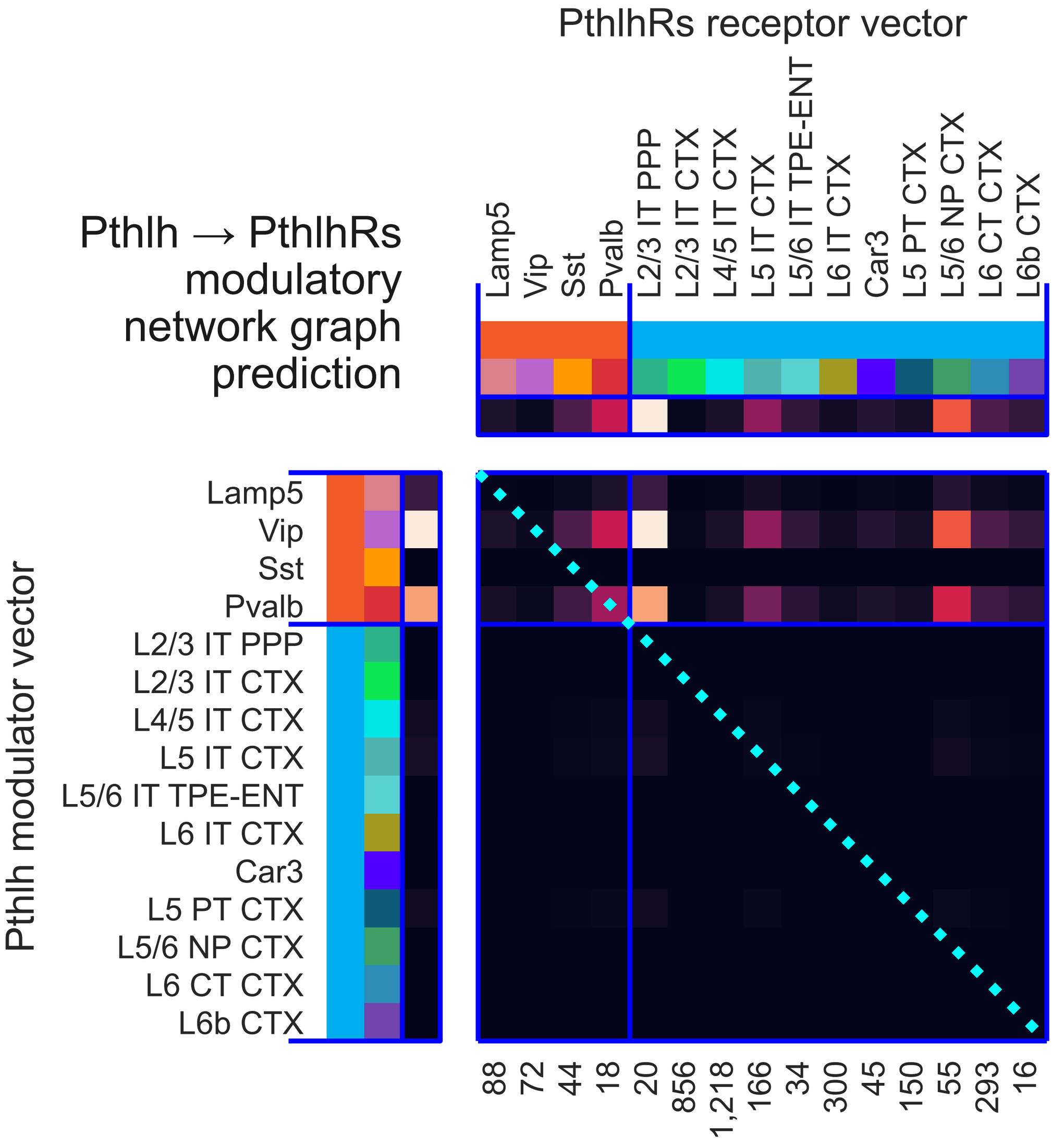
PthlhRs vector
max: 38%
mean: 14%

Pthlh vector
max: 84%
mean: 13%

Pthlh x PthlhRs
outer product
max: 32%
mean: 2%

diagonal
max: 25%
mean: 2%

Y21ss thr=10 sn:12402
Visual Cortex (VIS)



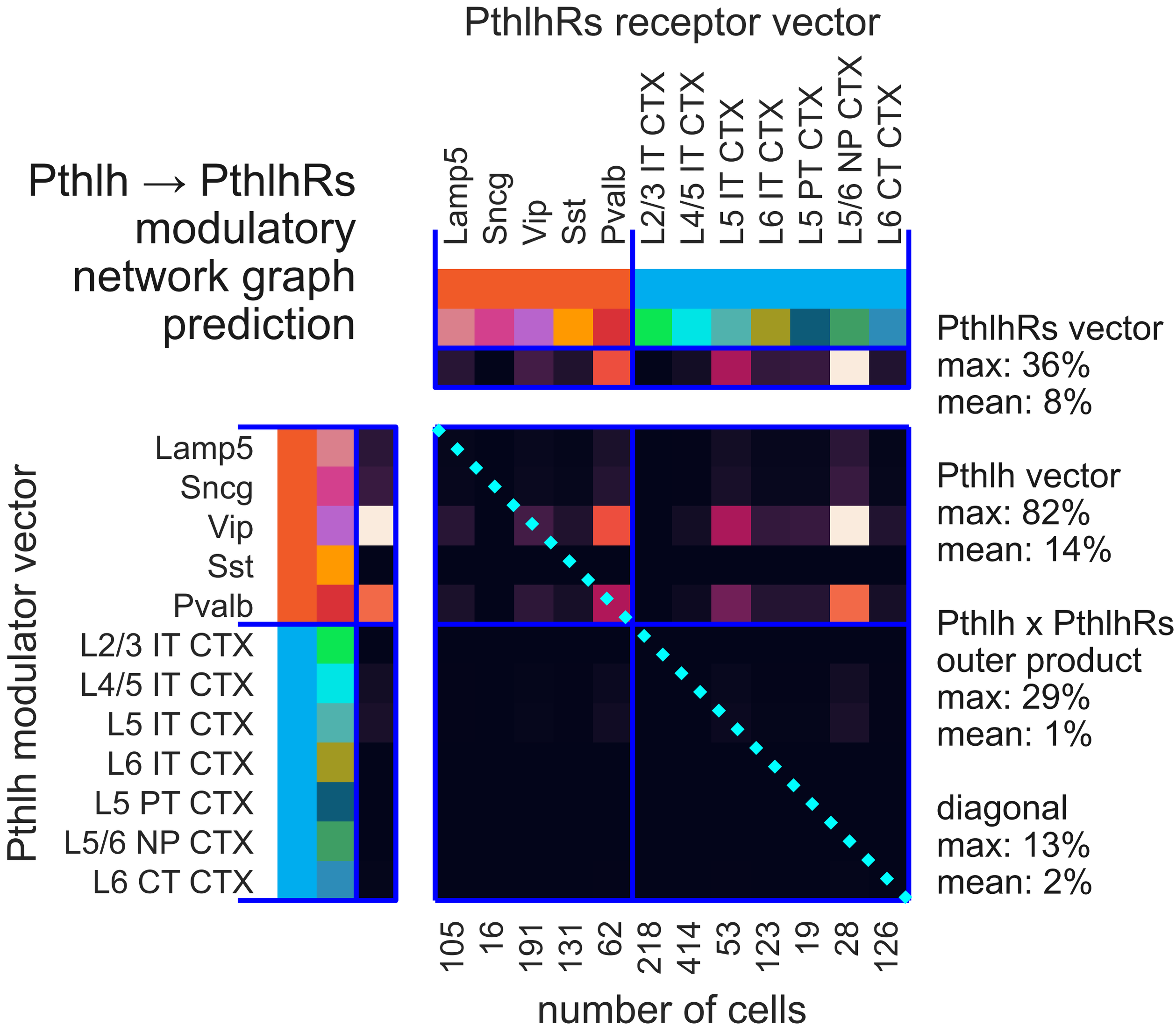
PthlhRs vector
max: 45%
mean: 11%

Pthlh vector
max: 89%
mean: 13%

Pthlh x PthlhRs
outer product
max: 40%
mean: 1%

diagonal
max: 16%
mean: 1%

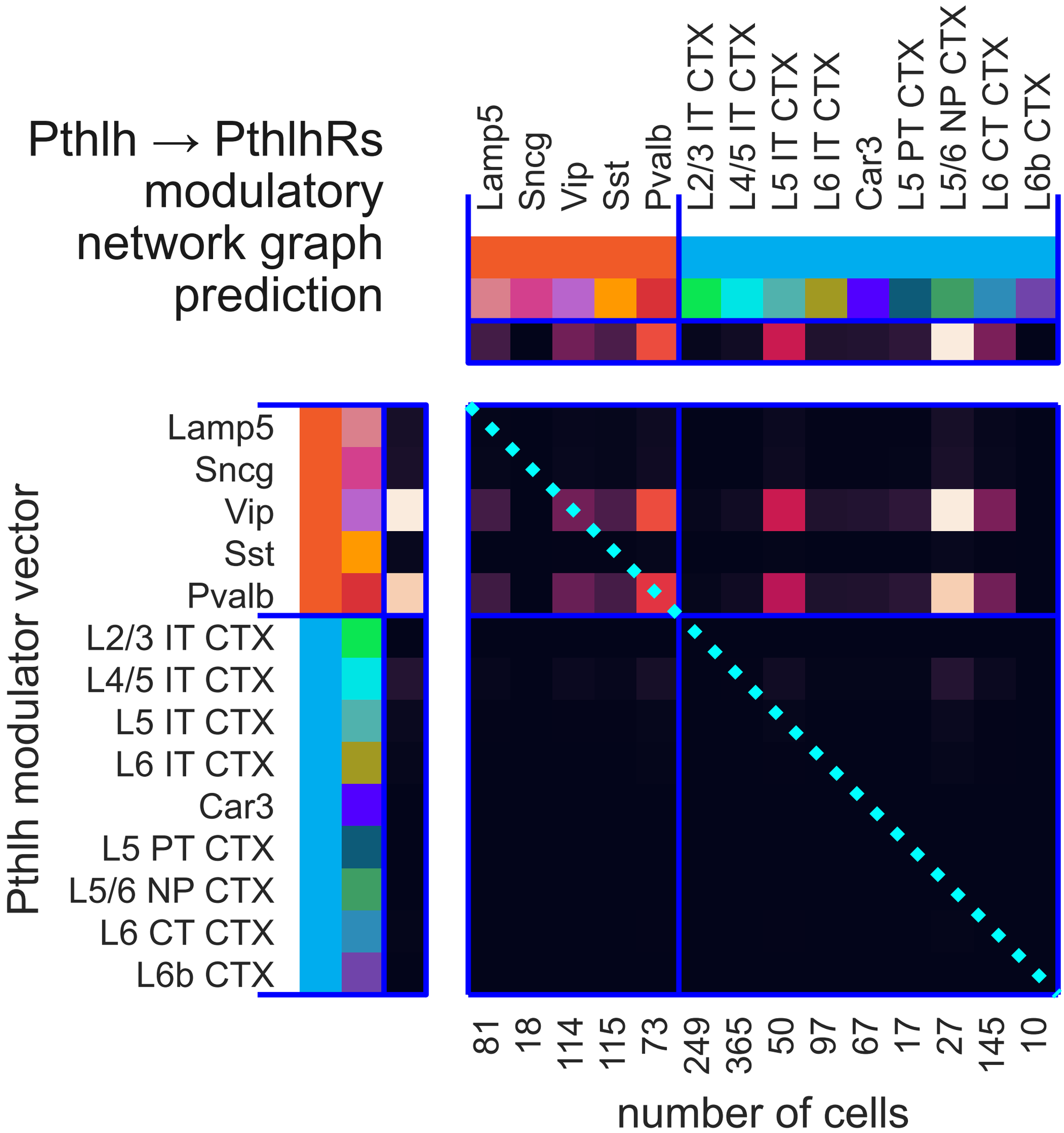
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

PthlhRs receptor vector

Pthlh → PthlhRs
modulatory
network graph
prediction



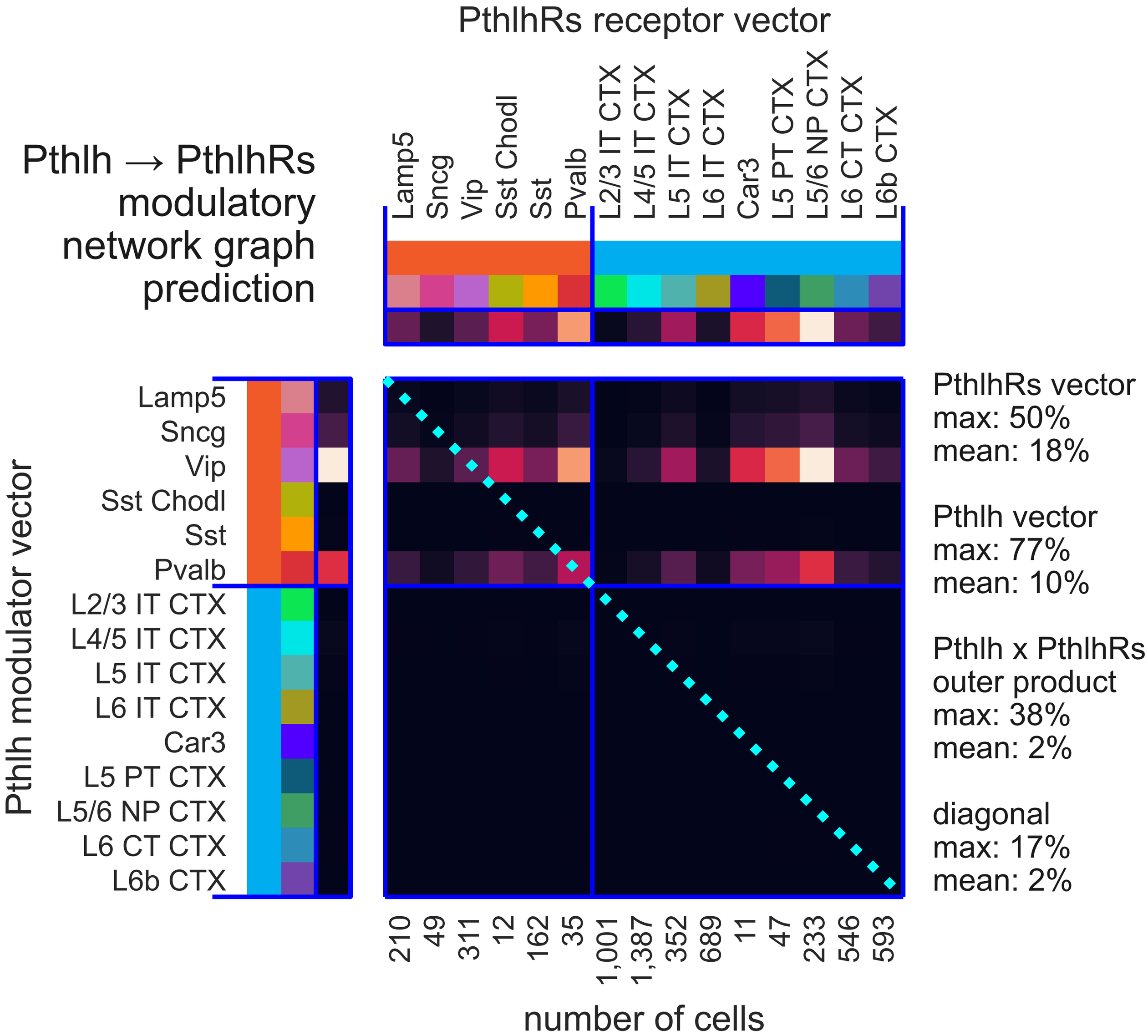
PthlhRs vector
max: 48%
mean: 12%

Pthlh vector
max: 82%
mean: 13%

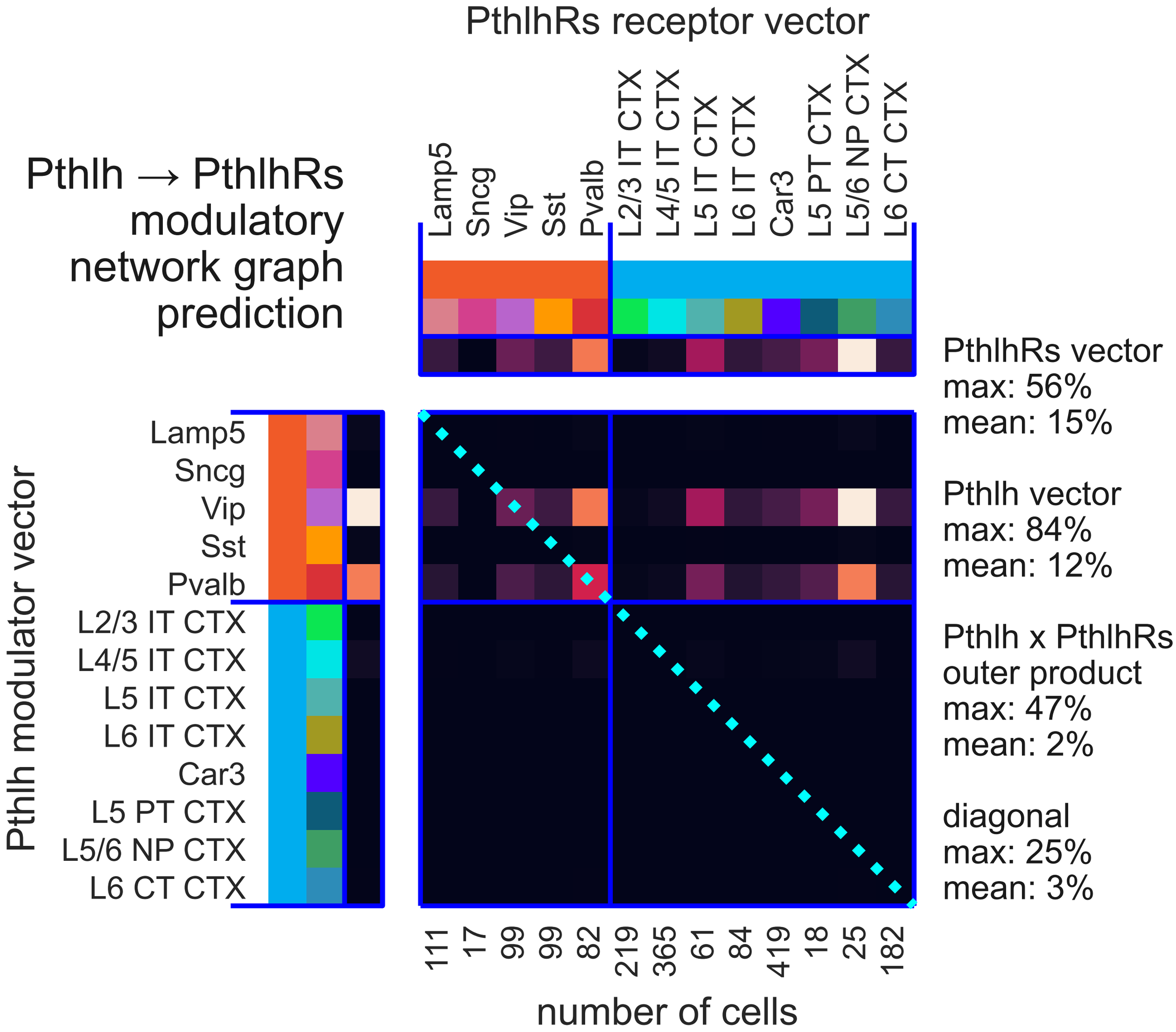
Pthlh x PthlhRs
outer product
max: 39%
mean: 2%

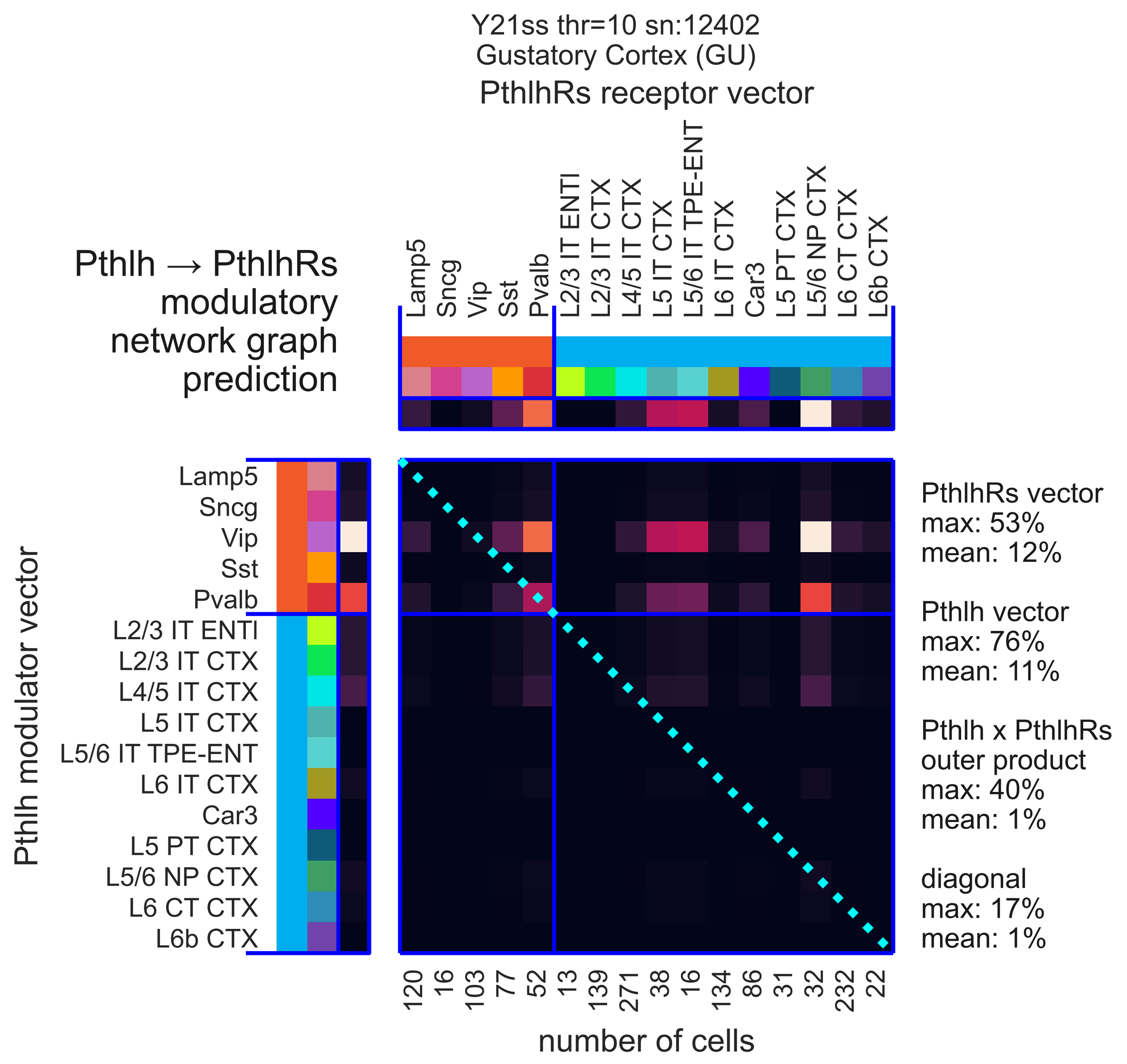
diagonal
max: 23%
mean: 3%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)

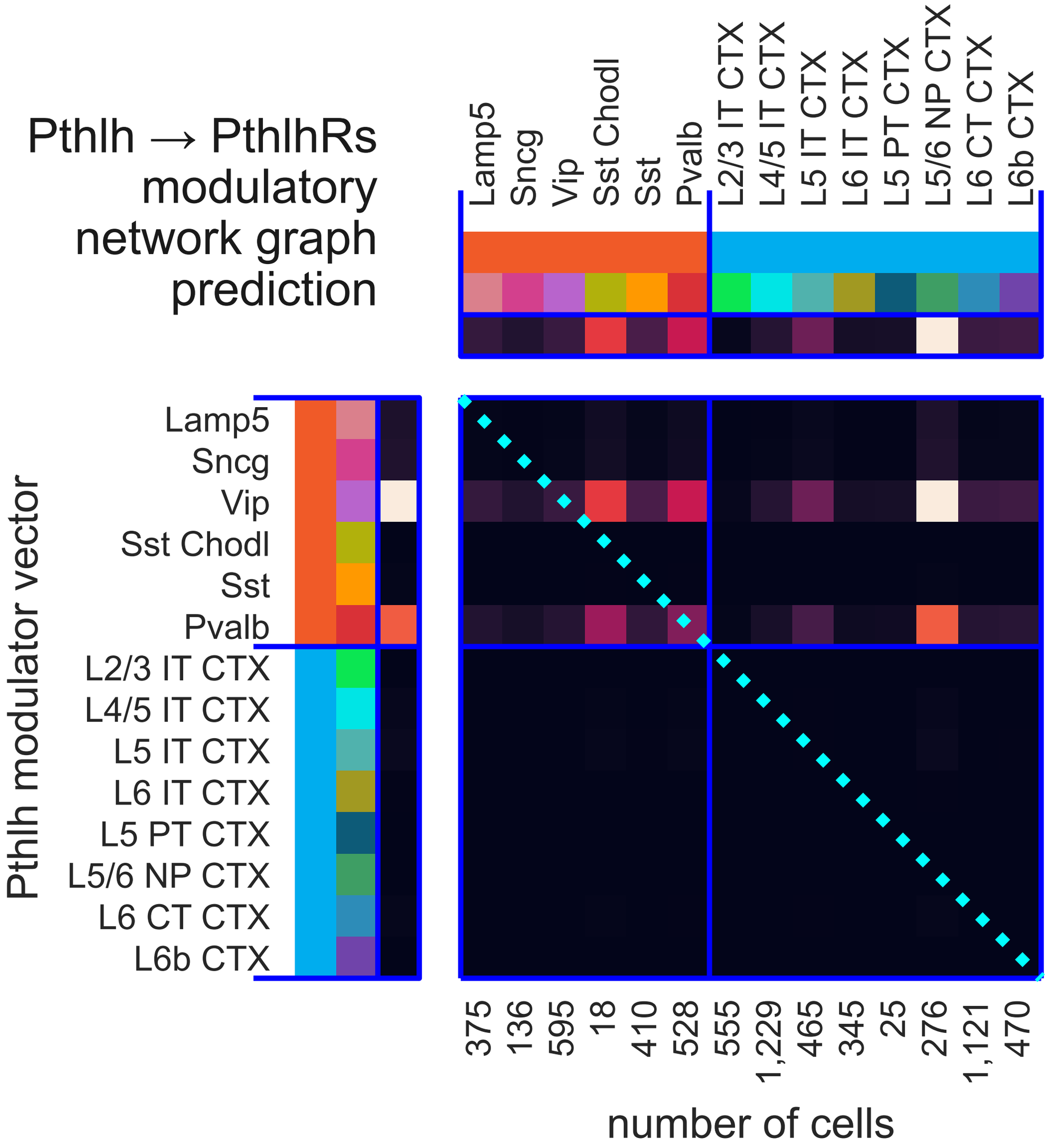



Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
PthlhRs receptor vector
Pthlh → PthlhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Pthlh modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
PthlhRs vector
max: 53%
mean: 12%
Pthlh vector
max: 76%
mean: 11%
Pthlh x PthlhRs
outer product
max: 40%
mean: 1%
diagonal
max: 17%
mean: 1%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)

PthlhRs receptor vector

Pthlh → PthlhRs
modulatory
network graph
prediction



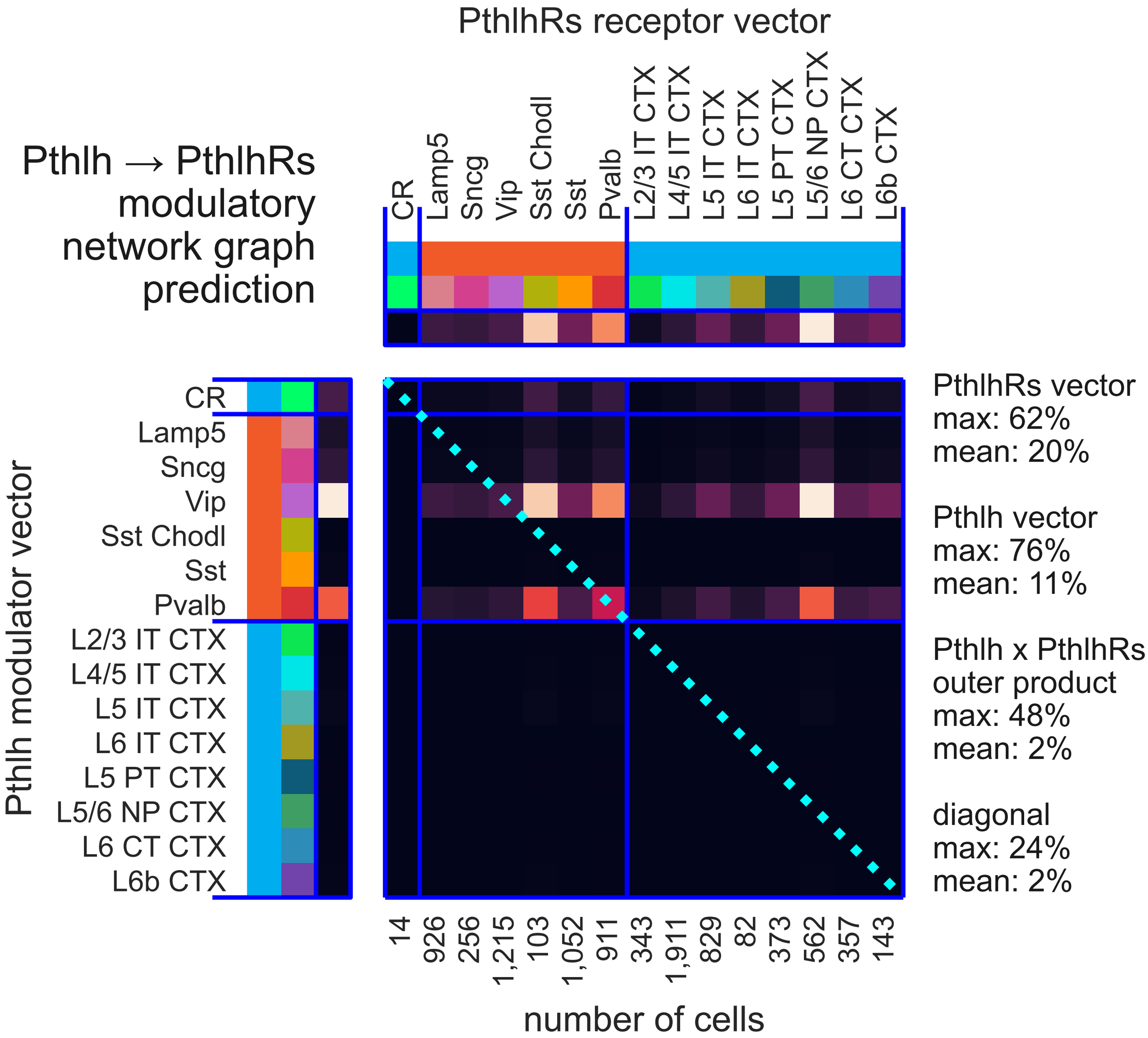
PthlhRs vector
max: 66%
mean: 16%

Pthlh vector
max: 70%
mean: 9%

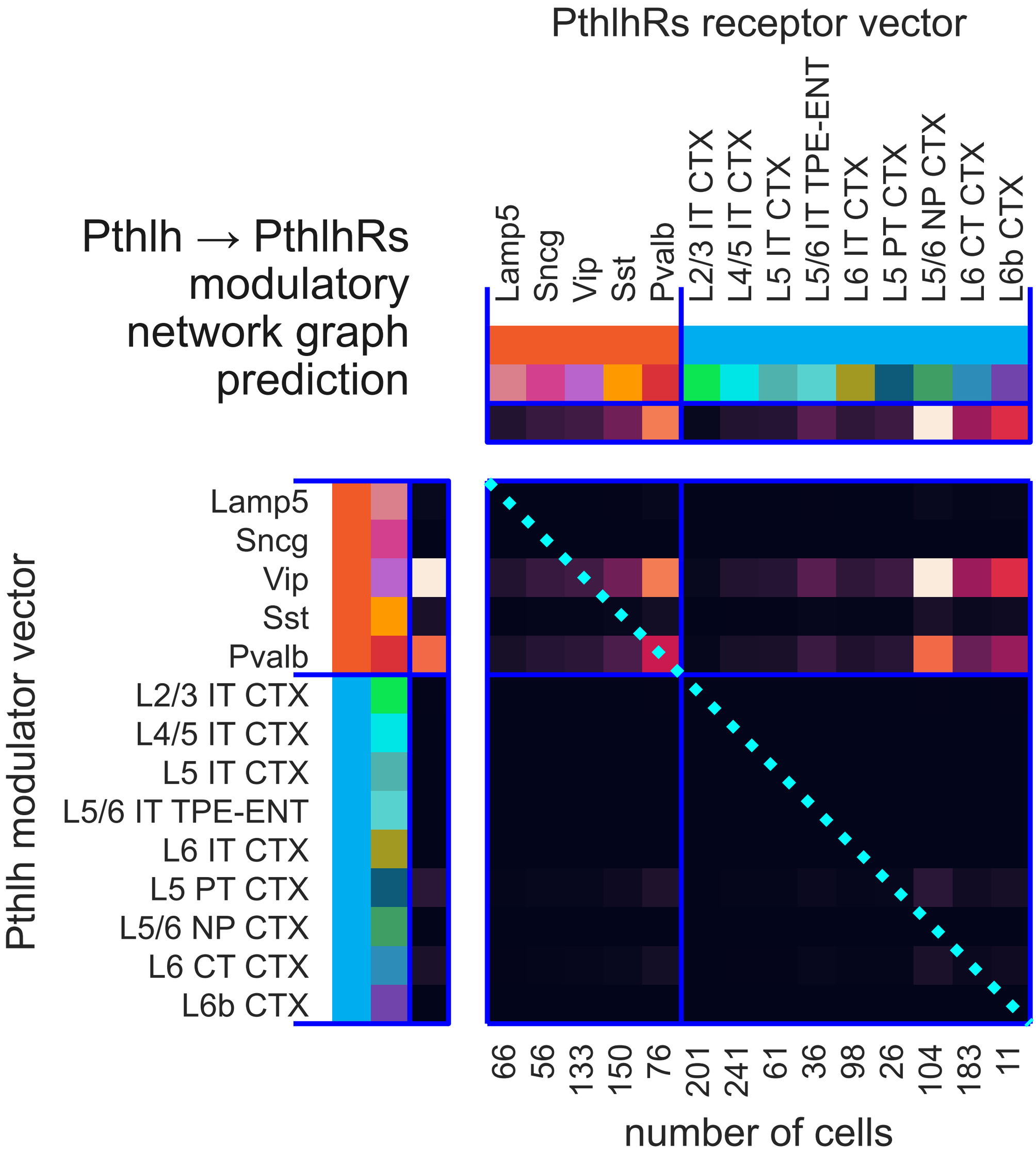
Pthlh x PthlhRs
outer product
max: 46%
mean: 2%

diagonal
max: 15%
mean: 2%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

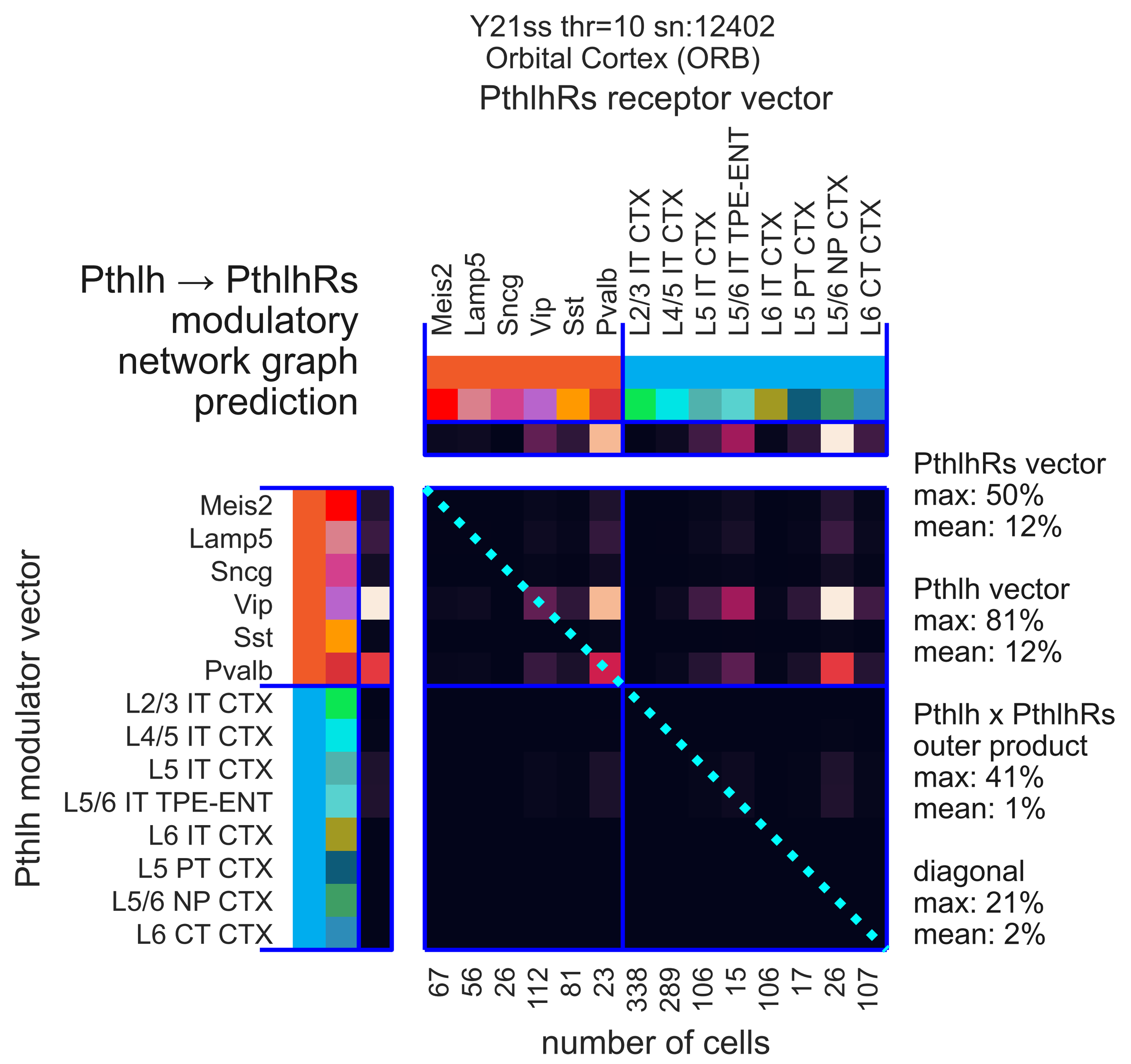


PthlhRs vector
max: 49%
mean: 14%

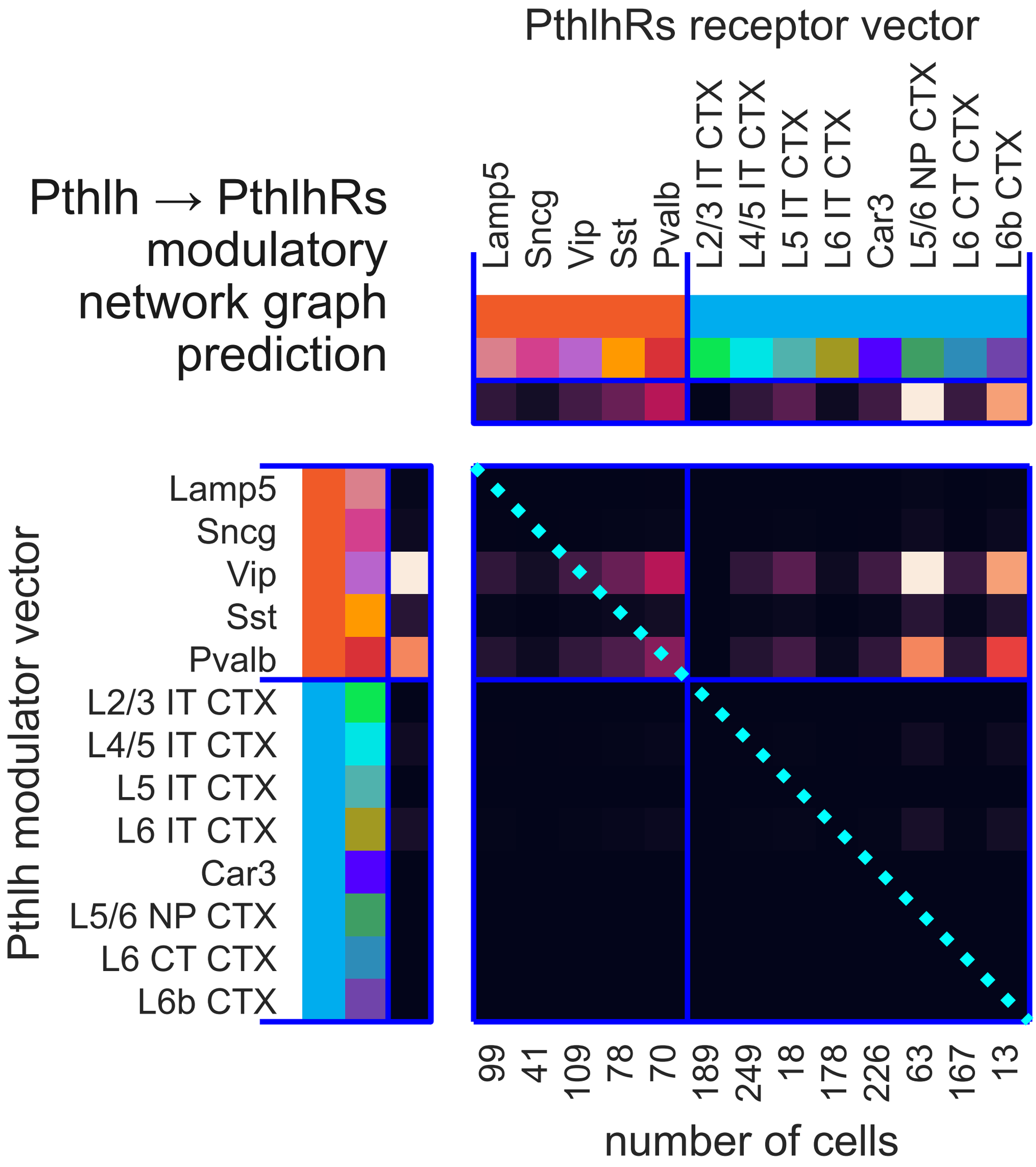
Pthlh vector
max: 69%
mean: 10%

Pthlh x PthlhRs
outer product
max: 34%
mean: 1%

diagonal
max: 17%
mean: 2%


Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
PthlhRs receptor vector
Pthlh → PthlhRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Pthlh modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
PthlhRs vector
max: 50%
mean: 12%
Pthlh vector
max: 81%
mean: 12%
Pthlh x PthlhRs
outer product
max: 41%
mean: 1%
diagonal
max: 21%
mean: 2%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



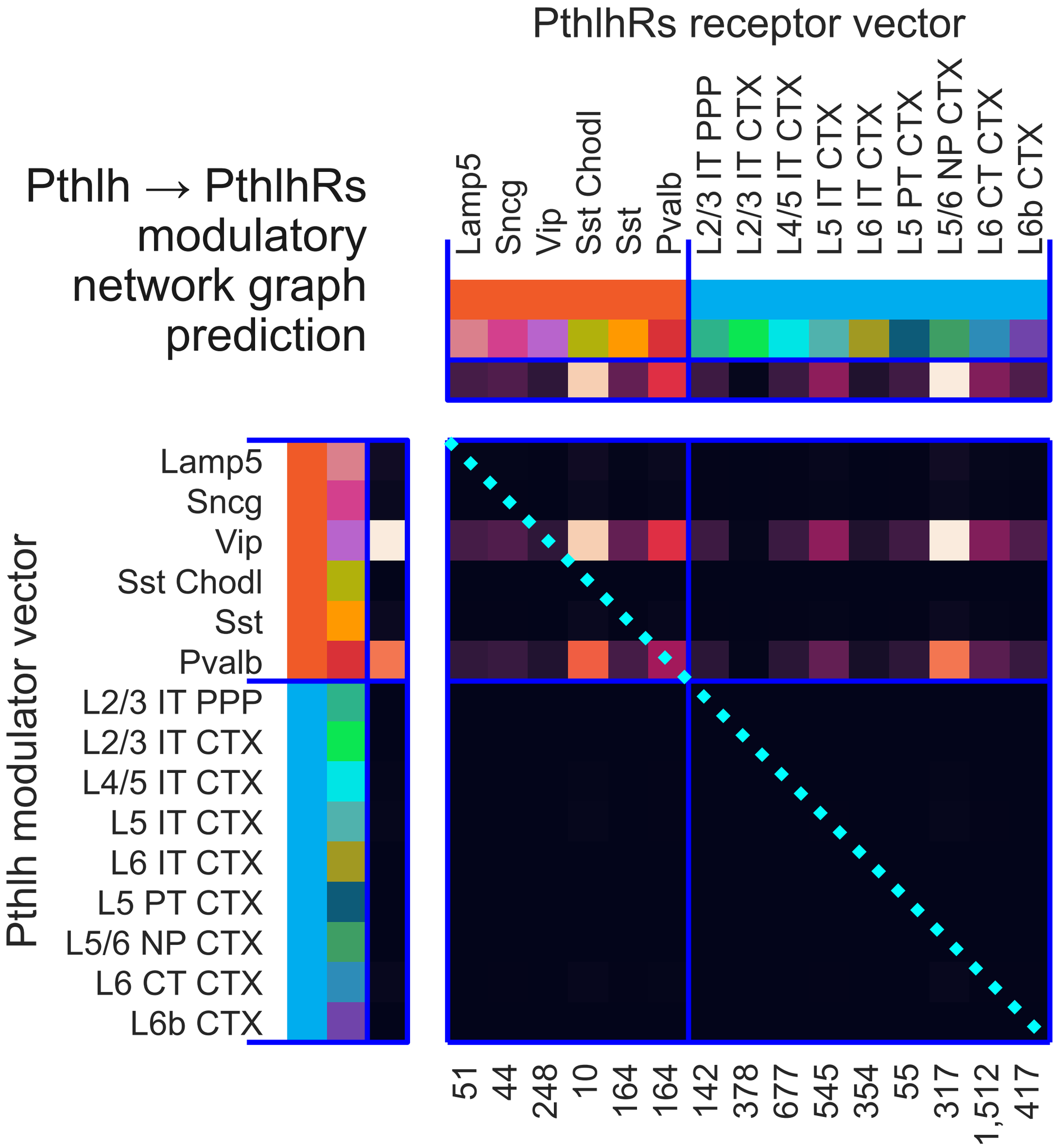
PthlhRs vector
max: 48%
mean: 13%

Pthlh vector
max: 71%
mean: 11%

Pthlh x PthlhRs
outer product
max: 34%
mean: 1%

diagonal
max: 11%
mean: 1%

Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)



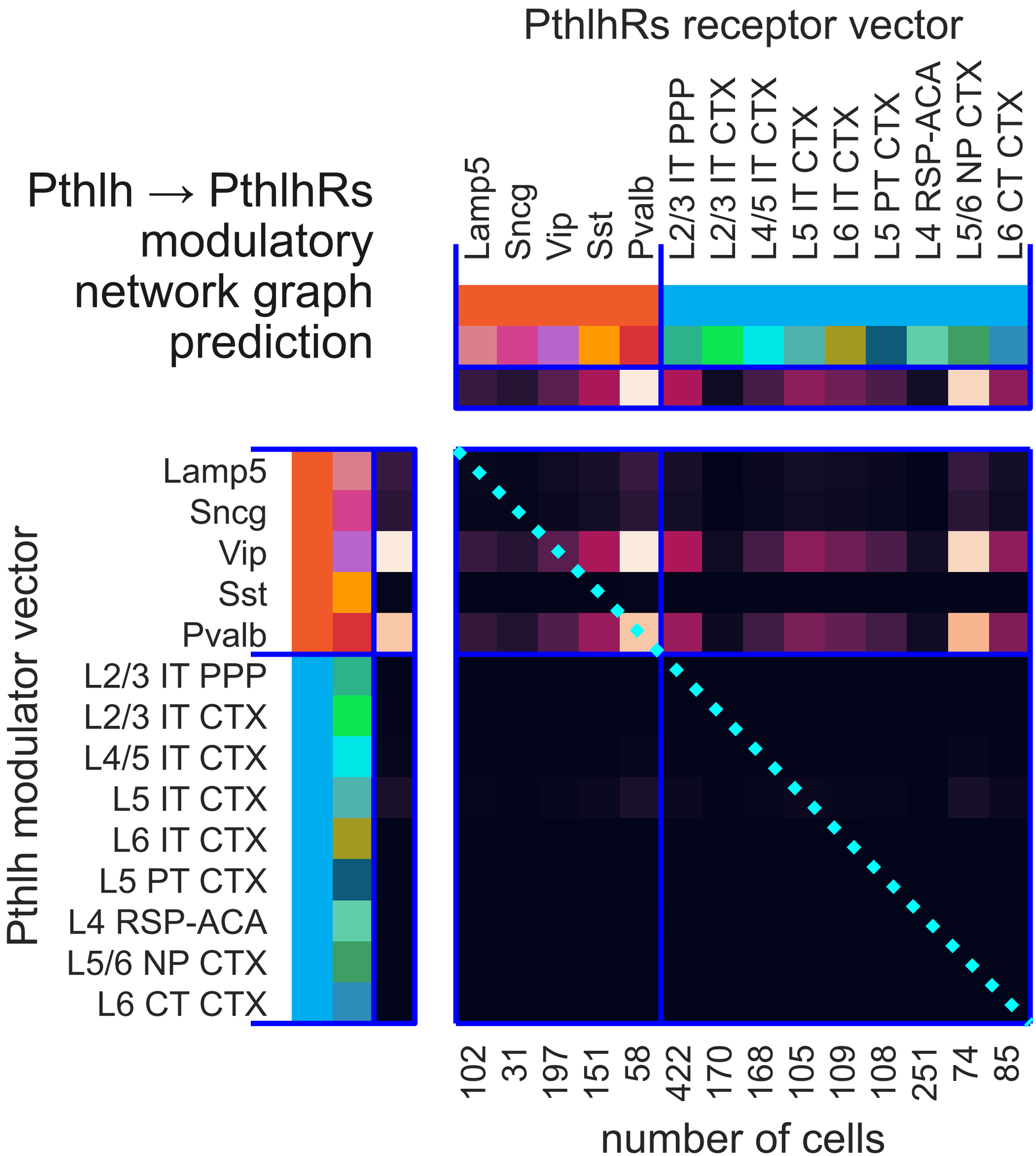
PthlhRs vector
max: 43%
mean: 14%

Pthlh vector
max: 85%
mean: 11%

Pthlh x PthlhRs
outer product
max: 37%
mean: 1%

diagonal
max: 15%
mean: 1%

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)



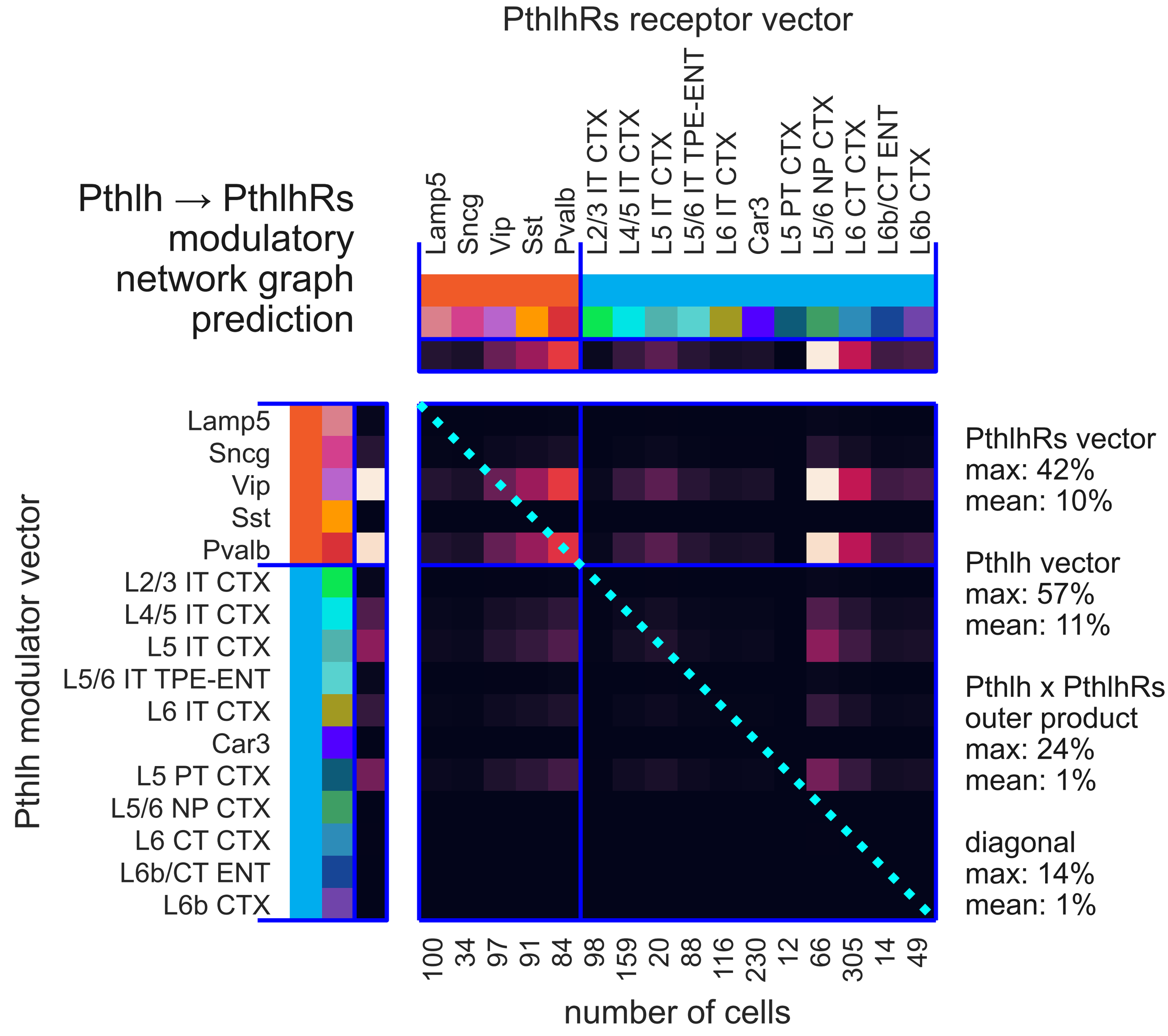
PthlhRs vector
max: 33%
mean: 11%

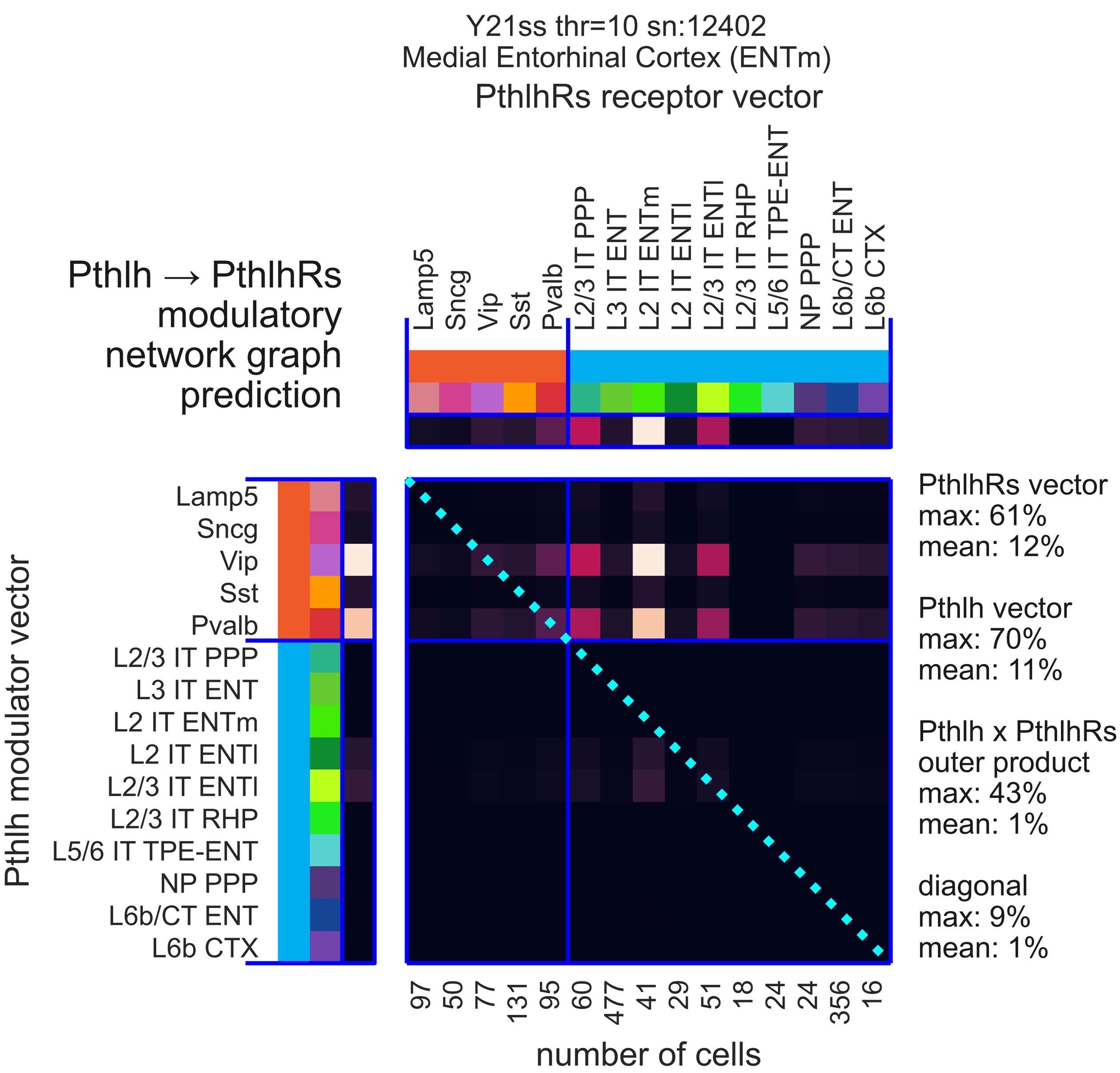
Pthlh vector
max: 84%
mean: 14%

Pthlh x PthlhRs
outer product
max: 27%
mean: 2%

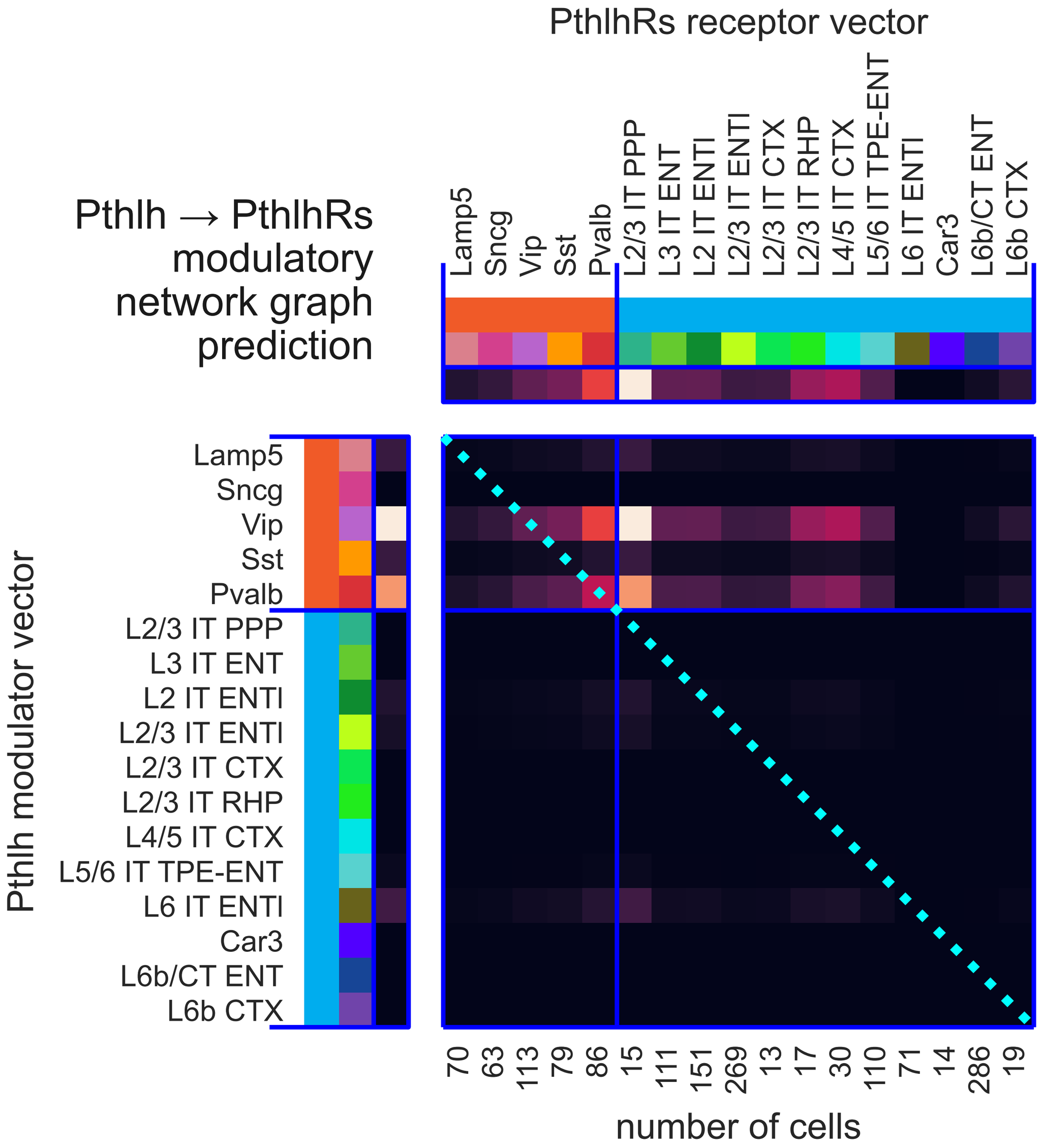
diagonal
max: 25%
mean: 2%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)




Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
PthlhRs receptor vector
Pthlh → PthlhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Pthlh modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
PthlhRs vector
max: 61%
mean: 12%
Pthlh vector
max: 70%
mean: 11%
Pthlh x PthlhRs
outer product
max: 43%
mean: 1%
diagonal
max: 9%
mean: 1%

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)



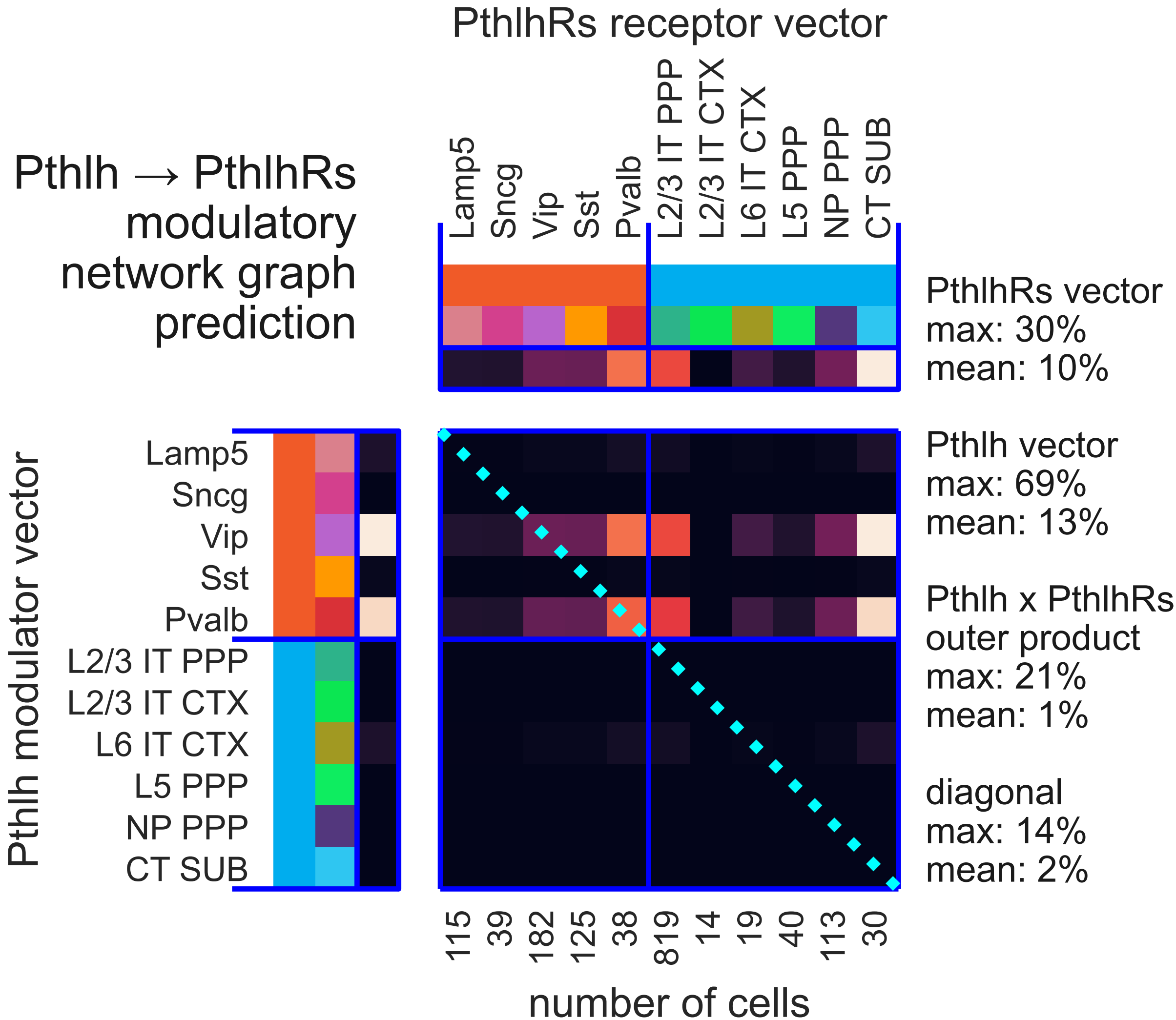
PthlhRs vector
max: 47%
mean: 12%

Pthlh vector
max: 75%
mean: 11%

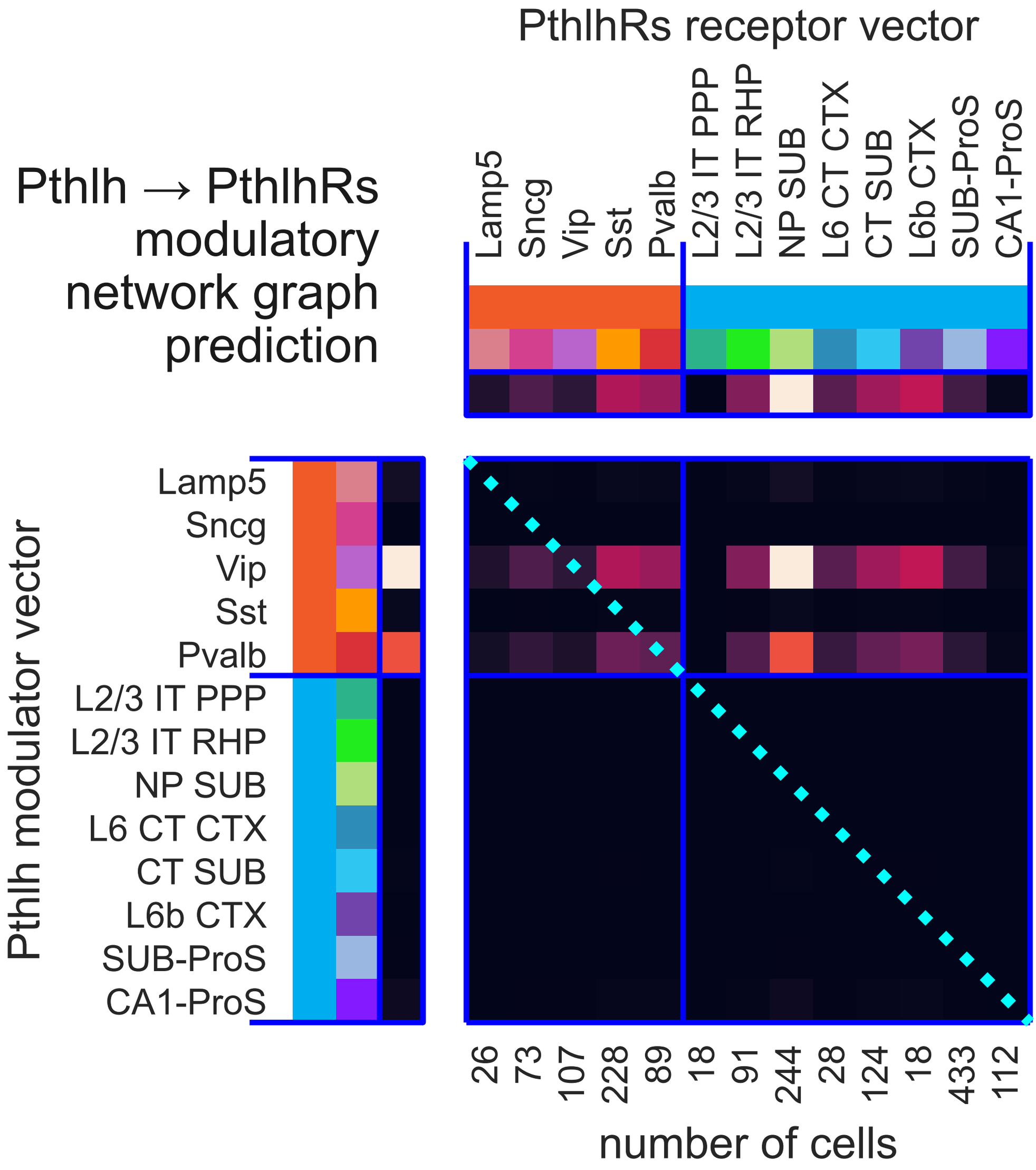
Pthlh x PthlhRs
outer product
max: 35%
mean: 1%

diagonal
max: 17%
mean: 2%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



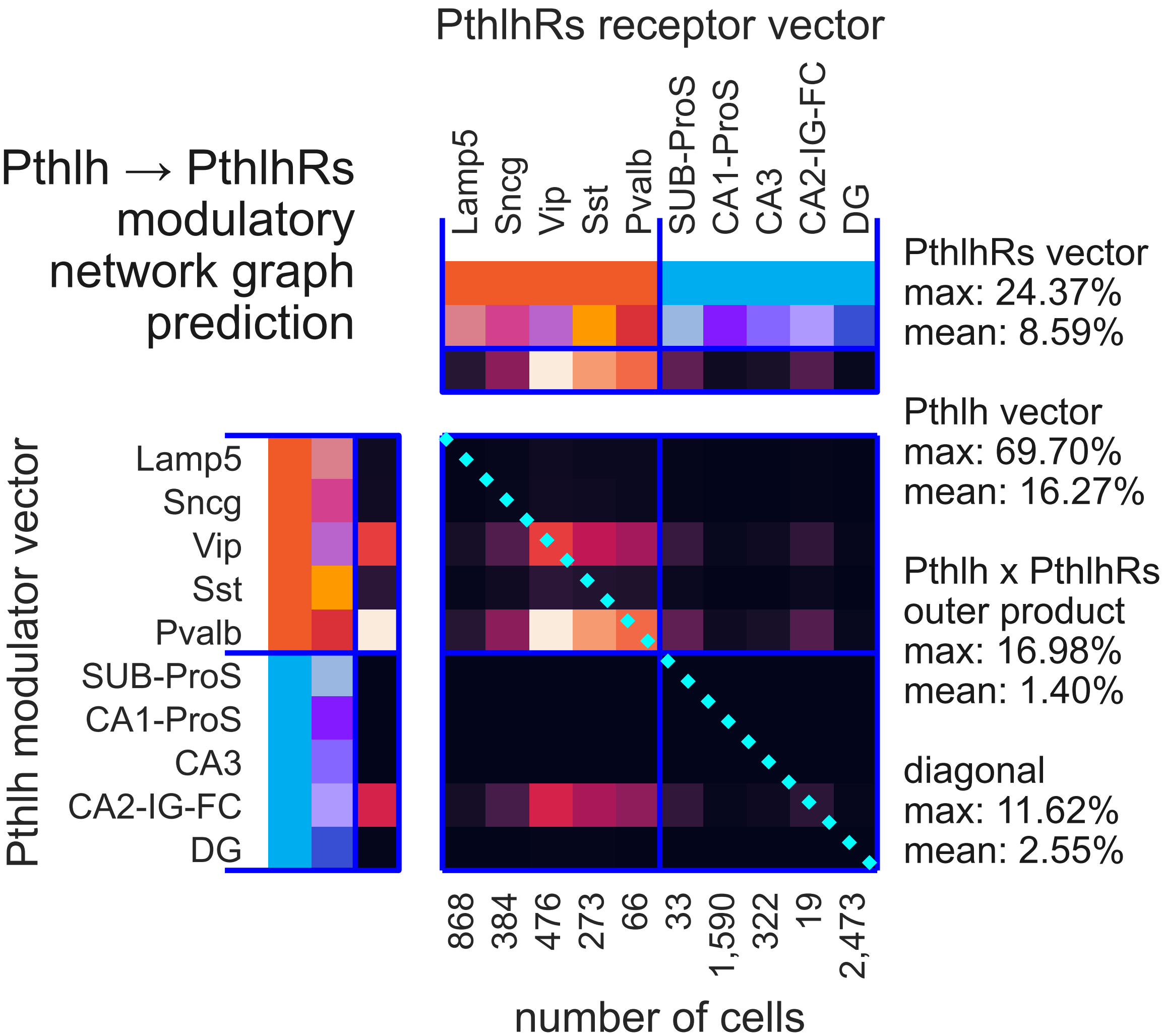
PthlhRs vector
max: 47%
mean: 14%

Pthlh vector
max: 81%
mean: 11%

Pthlh x PthlhRs
outer product
max: 38%
mean: 2%

diagonal
max: 9%
mean: 1%

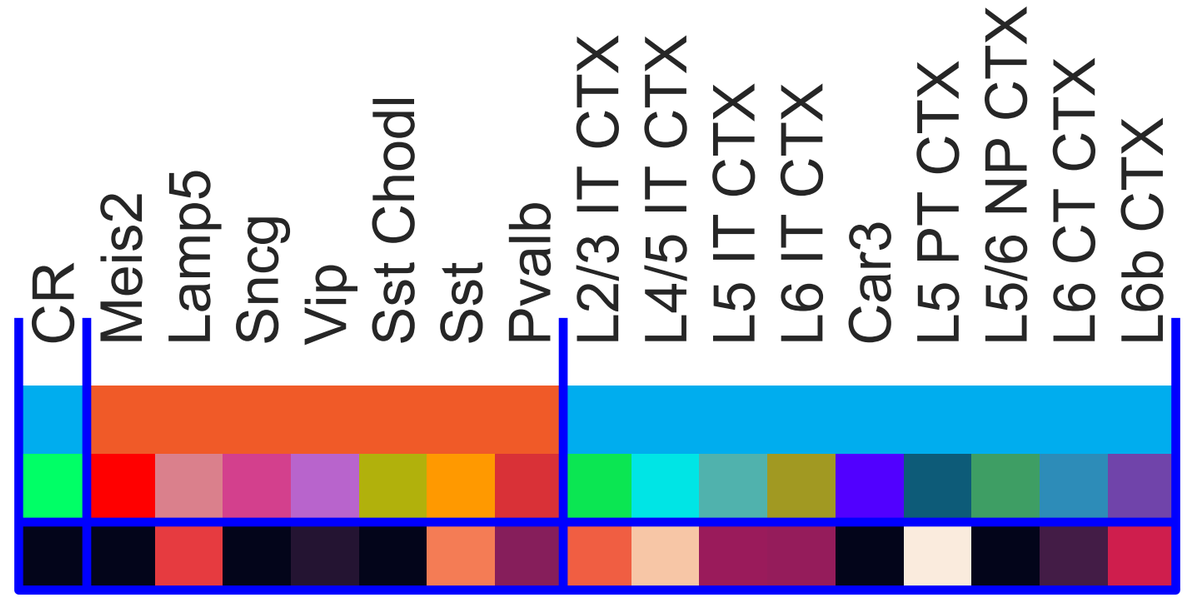
Y21ss thr=10 sn:12402
Hippocampus (HIP)

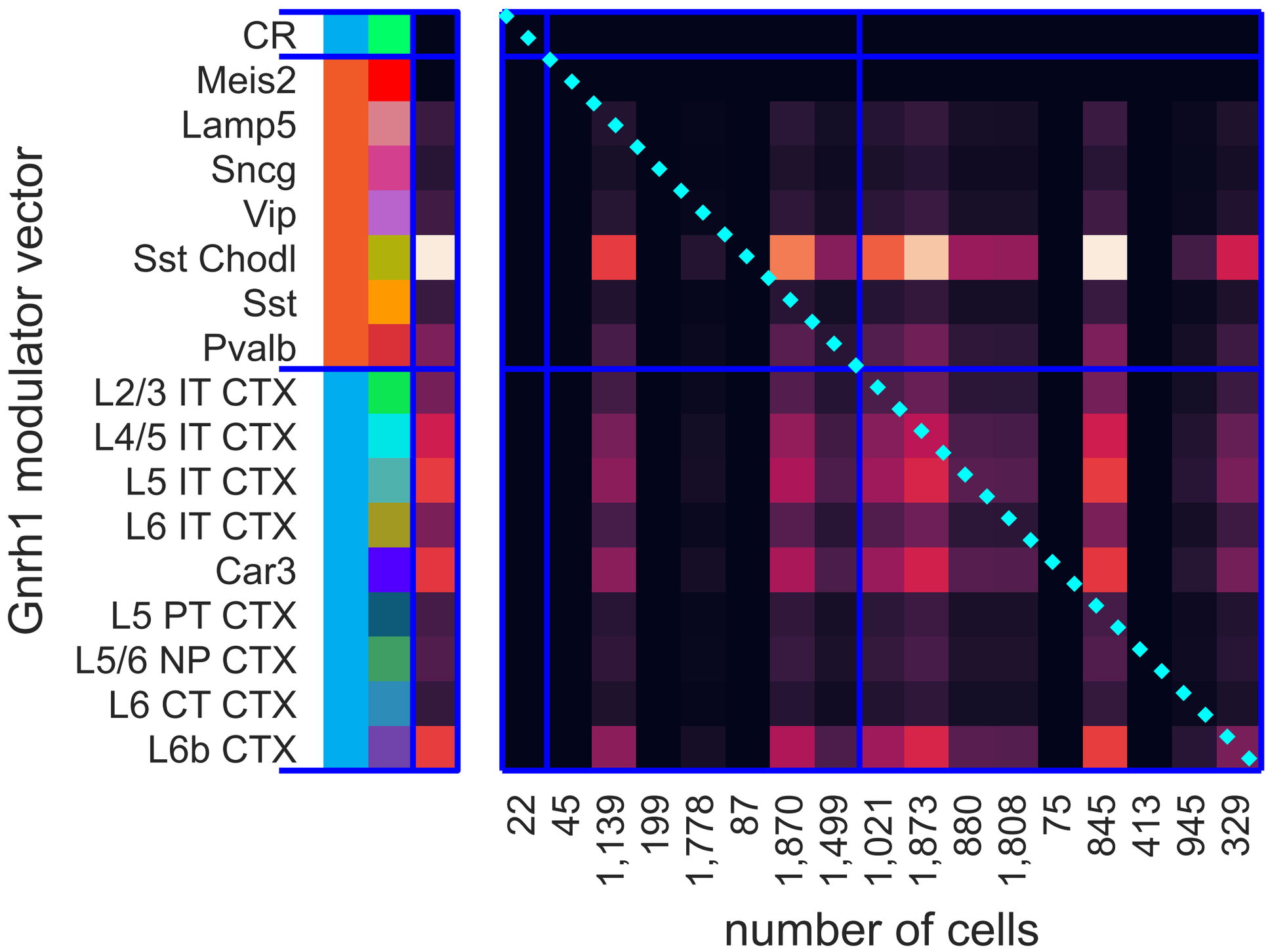


Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)

Gnrh1Rs receptor vector

Gnrh1 → Gnrh1Rs
modulatory
network graph
prediction





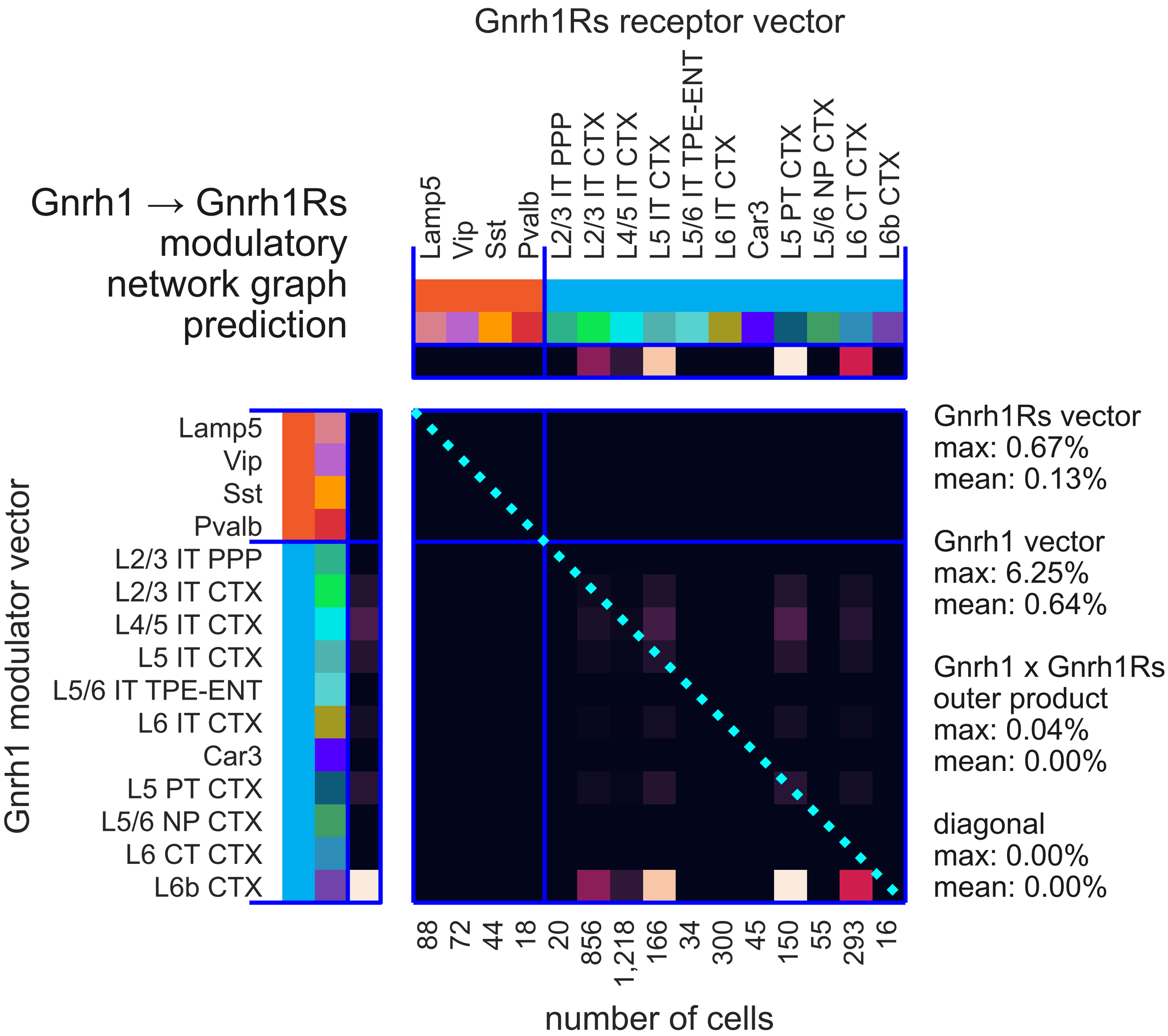
Gnrh1Rs vector
max: 0.59%
mean: 0.20%

Gnrh1 vector
max: 4.60%
mean: 1.44%

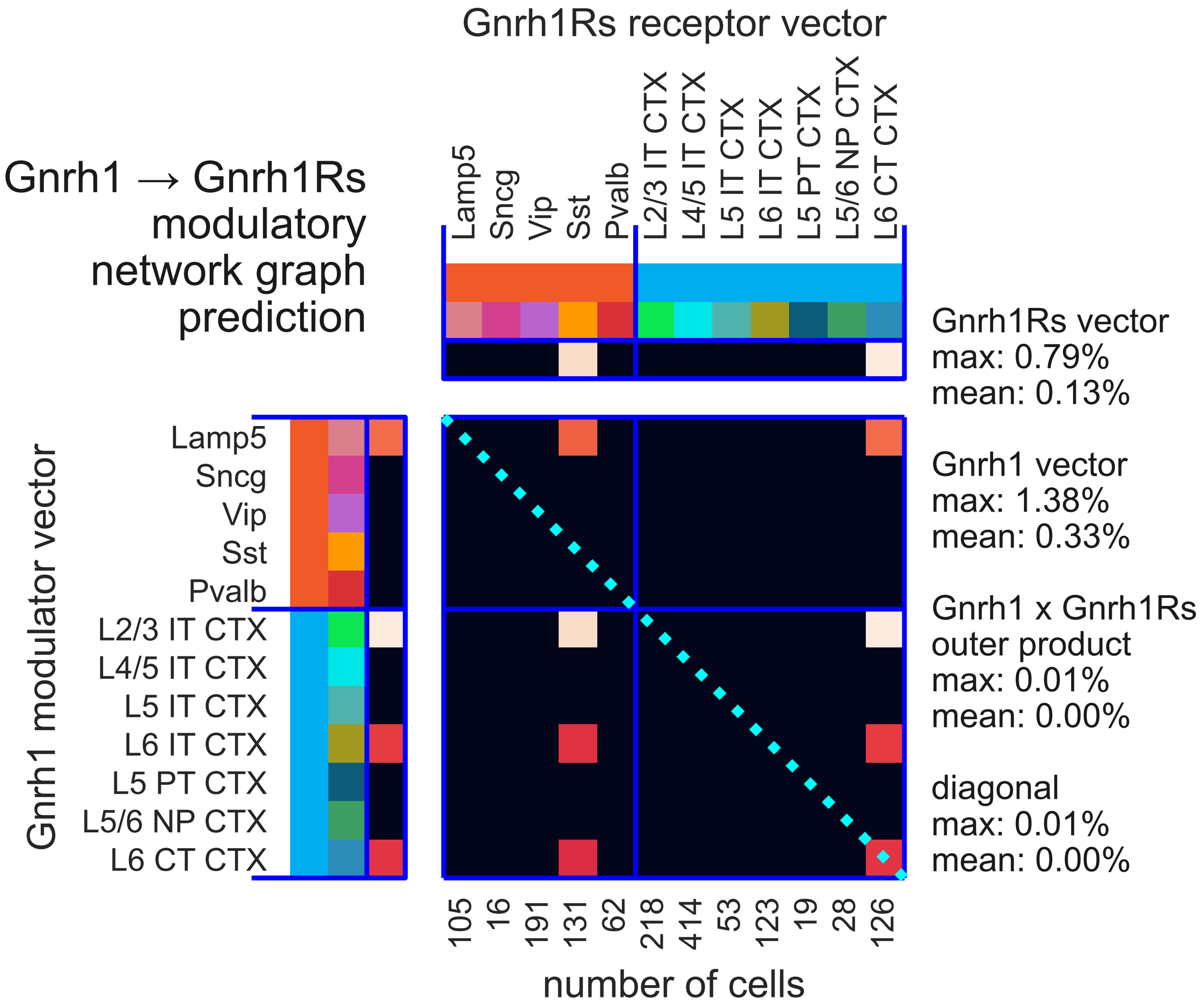
Gnrh1 x Gnrh1Rs
outer product
max: 0.03%
mean: 0.00%

diagonal
max: 0.01%
mean: 0.00%

Y21ss thr=10 sn:12402
Visual Cortex (VIS)



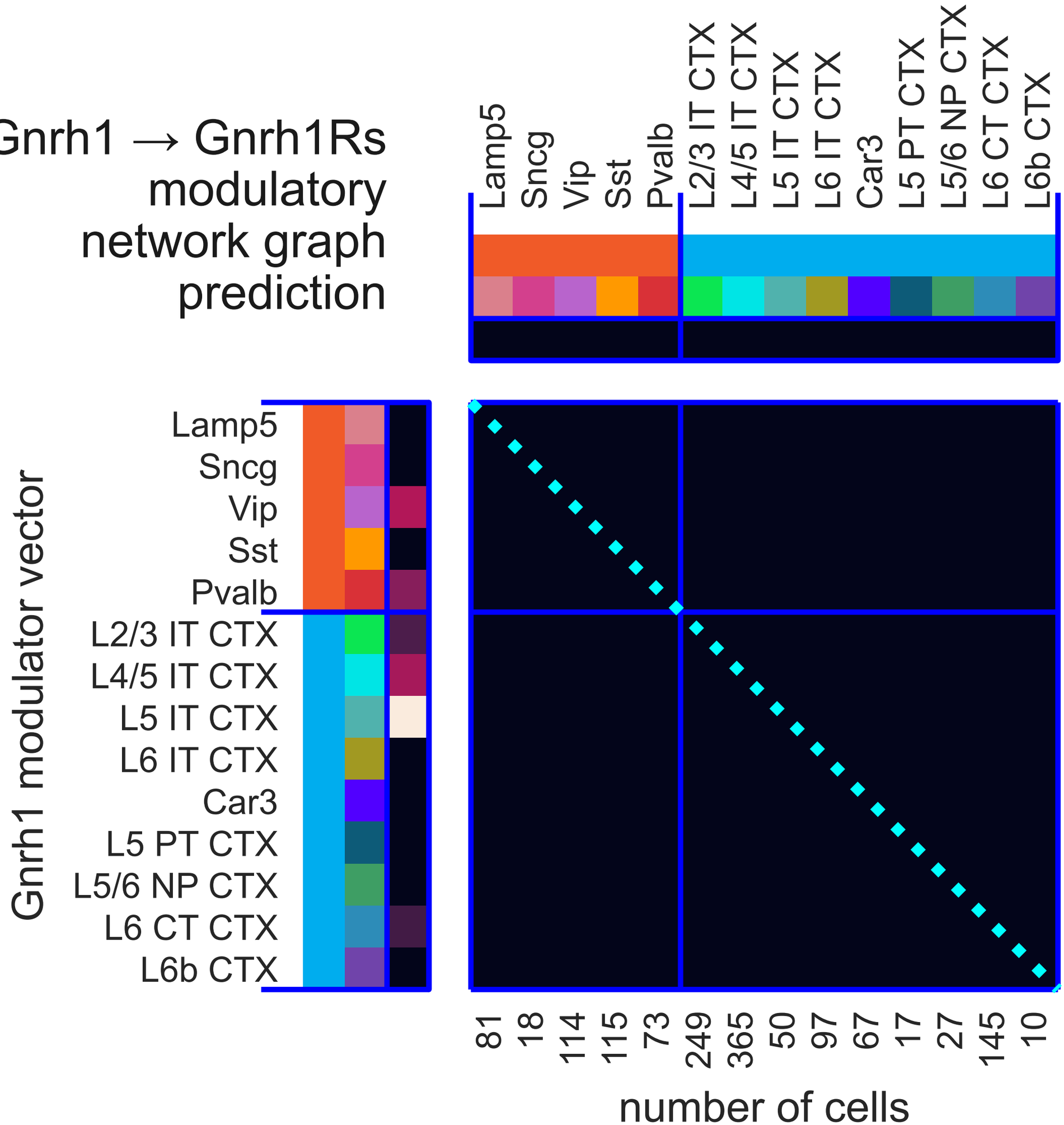
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

Gnrh1Rs receptor vector

Gnrh1 → Gnrh1Rs
modulatory
network graph
prediction



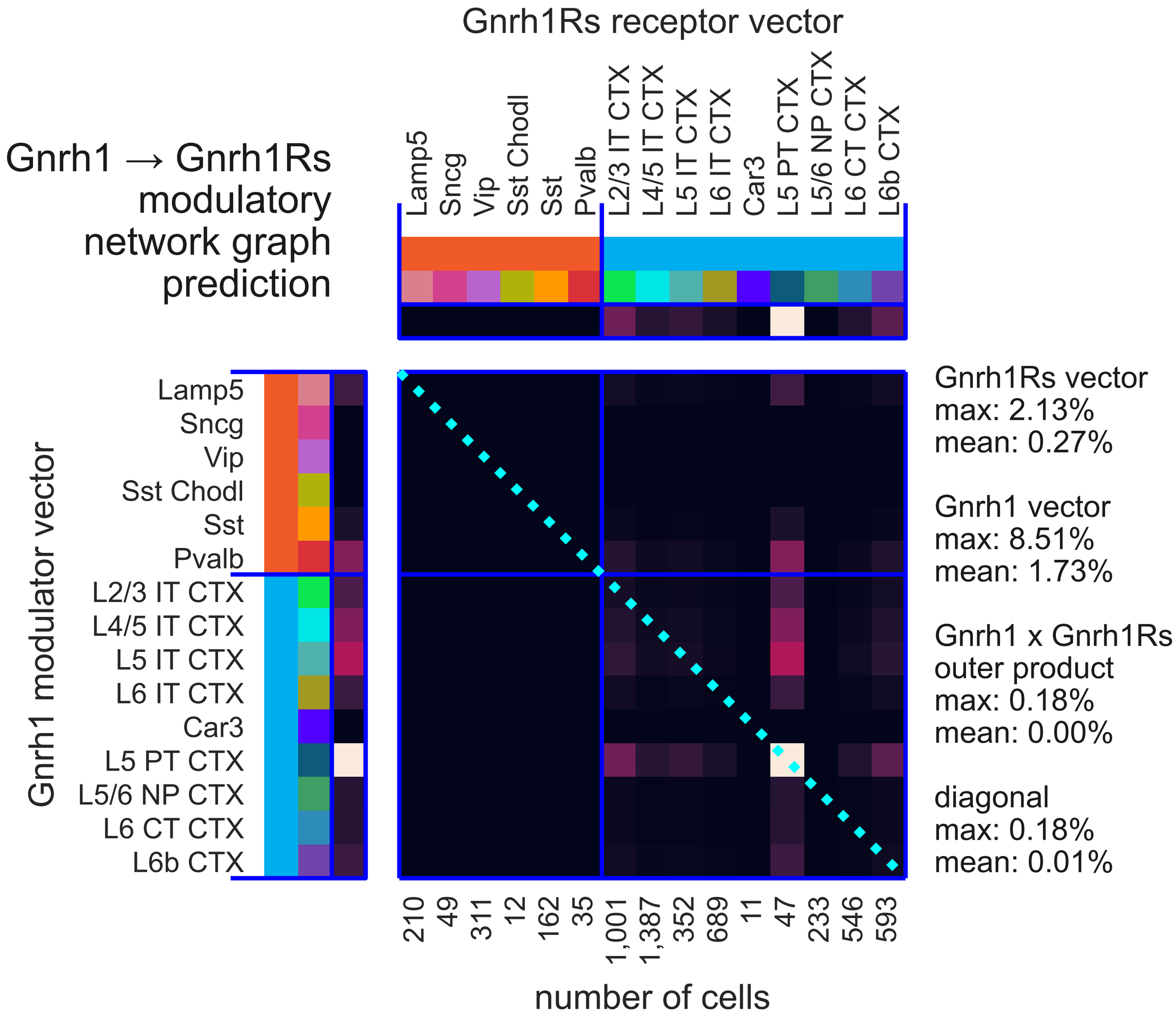
Gnrh1Rs vector
max: 0.00%
mean: 0.00%

Gnrh1 vector
max: 4.00%
mean: 0.73%

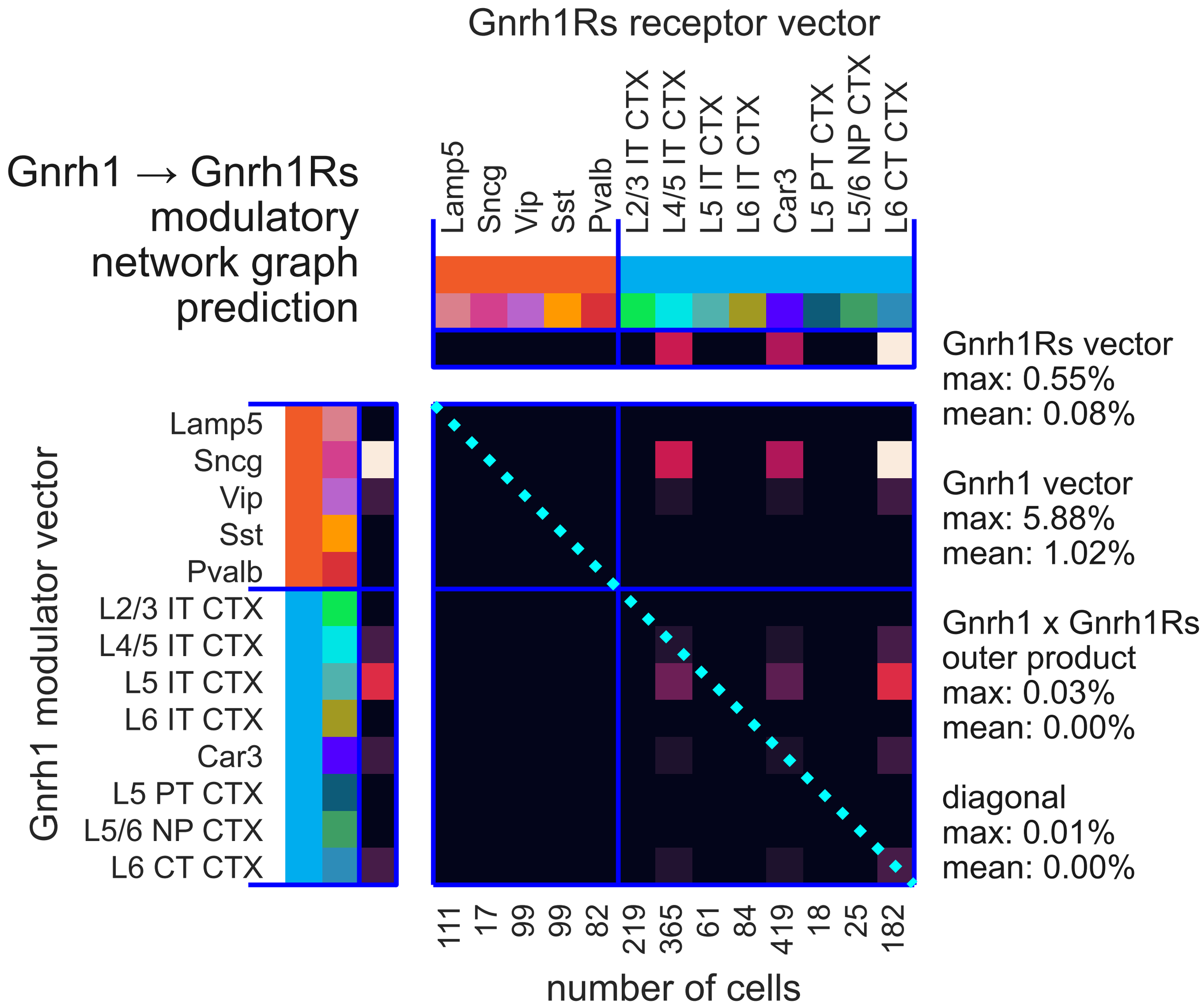
Gnrh1 x Gnrh1Rs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



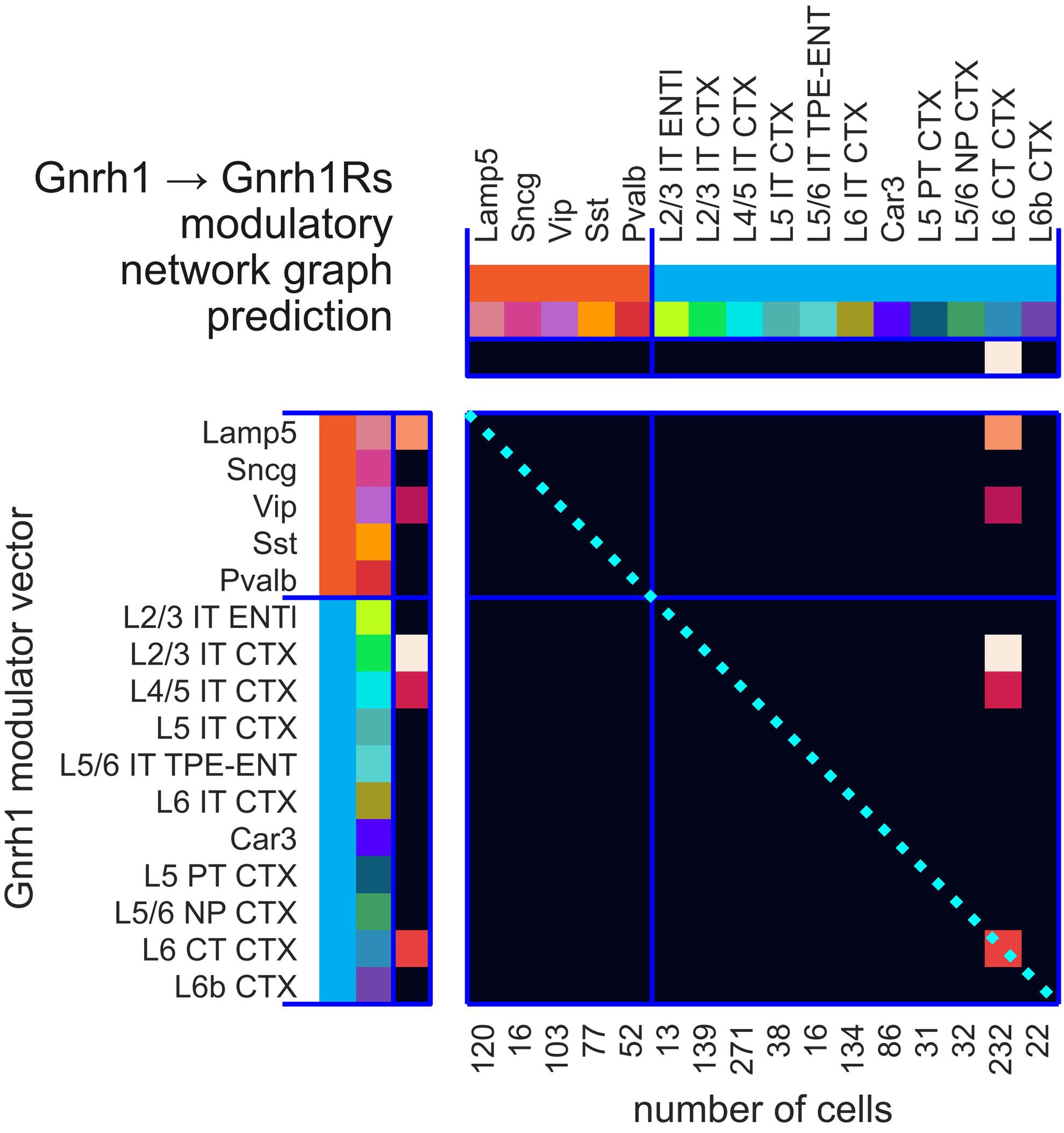
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



Y21ss thr=10 sn:12402
Gustatory Cortex (GU)

Gnrh1Rs receptor vector

Gnrh1 → Gnrh1Rs
modulatory
network graph
prediction



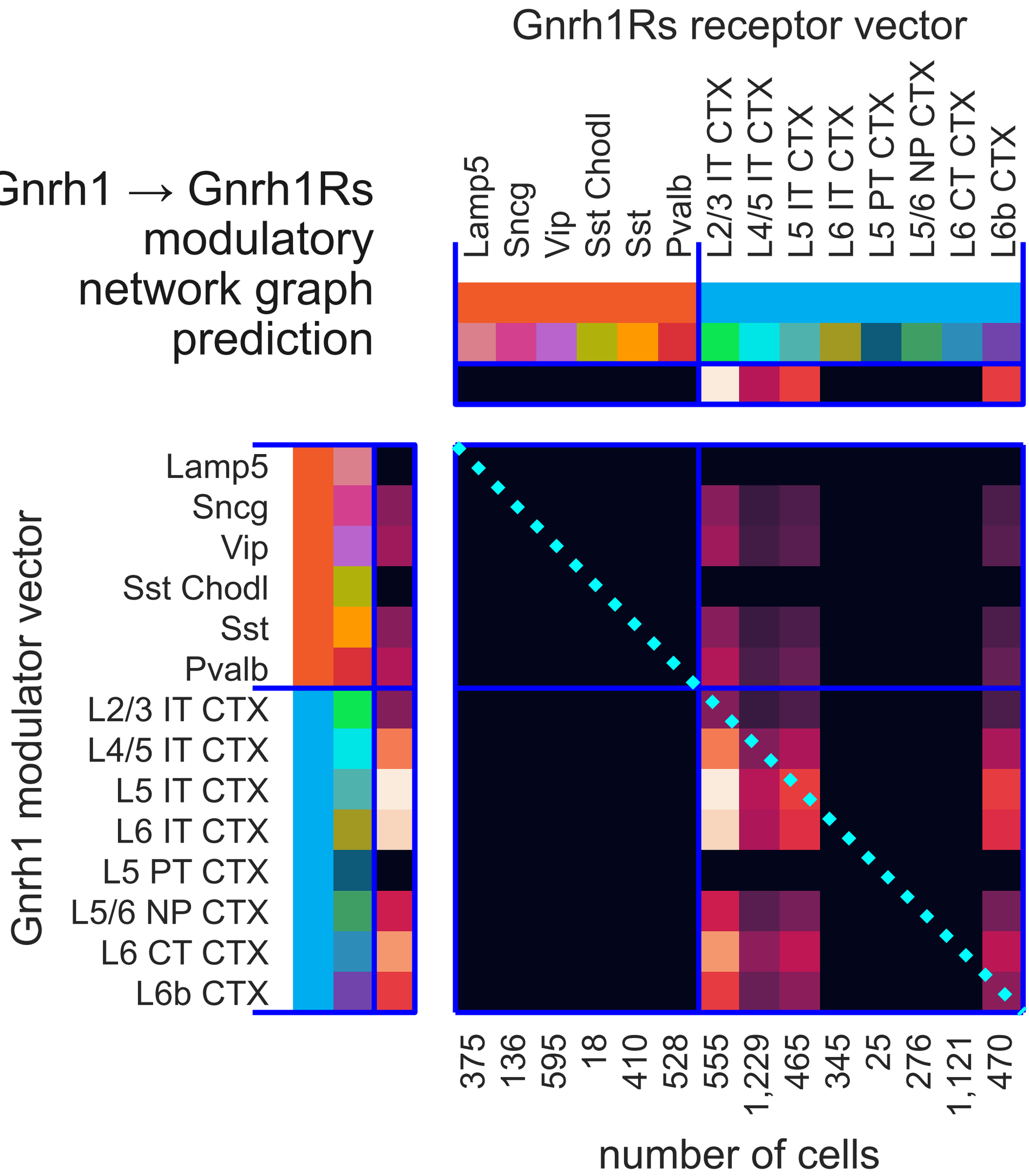
Gnrh1Rs vector
max: 1.72%
mean: 0.11%

Gnrh1 vector
max: 2.16%
mean: 0.45%

Gnrh1 x Gnrh1Rs
outer product
max: 0.04%
mean: 0.00%

diagonal
max: 0.02%
mean: 0.00%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



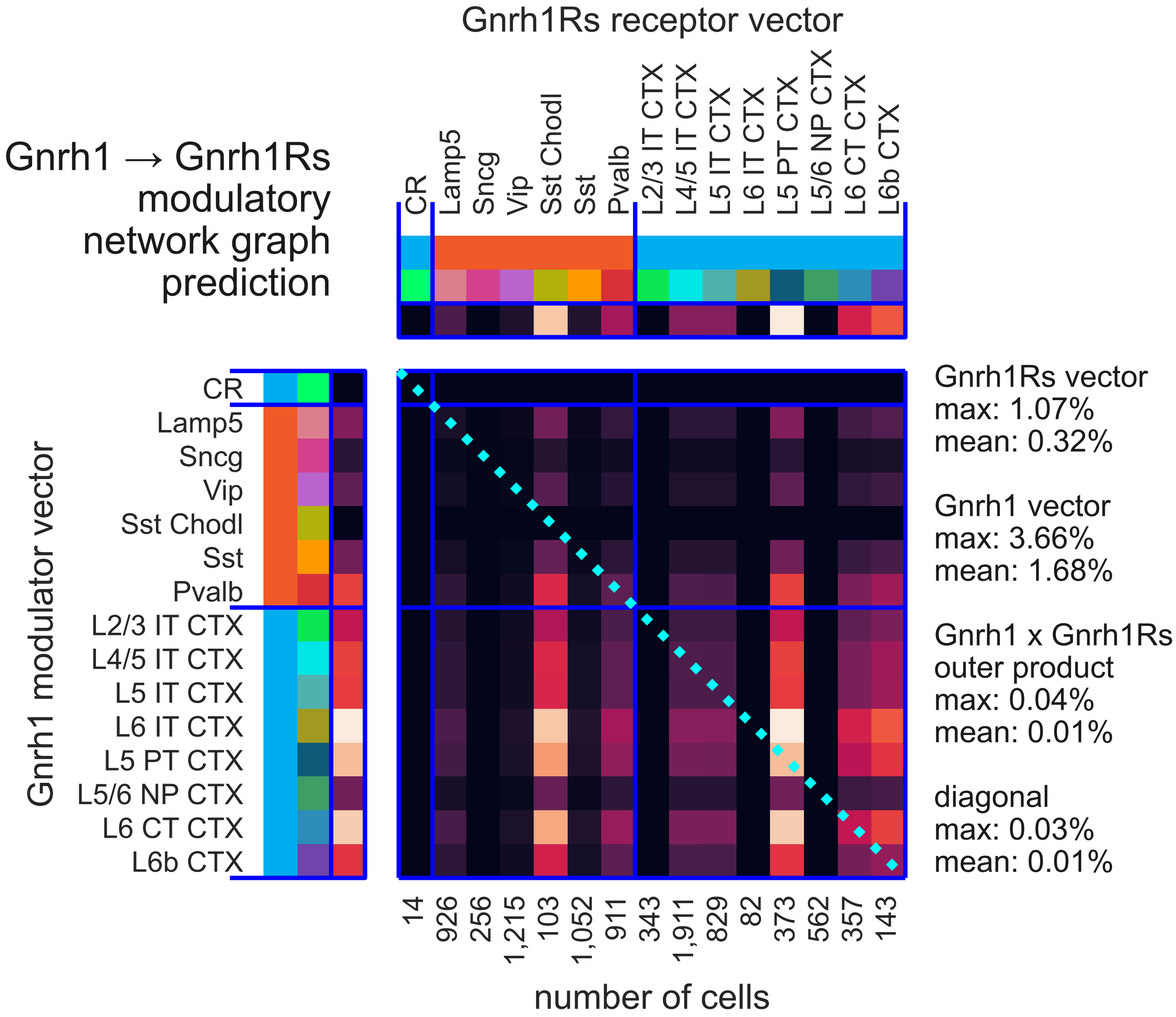
Gnrh1Rs vector
max: 0.36%
mean: 0.07%

Gnrh1 vector
max: 2.15%
mean: 0.98%

Gnrh1 x Gnrh1Rs
outer product
max: 0.01%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

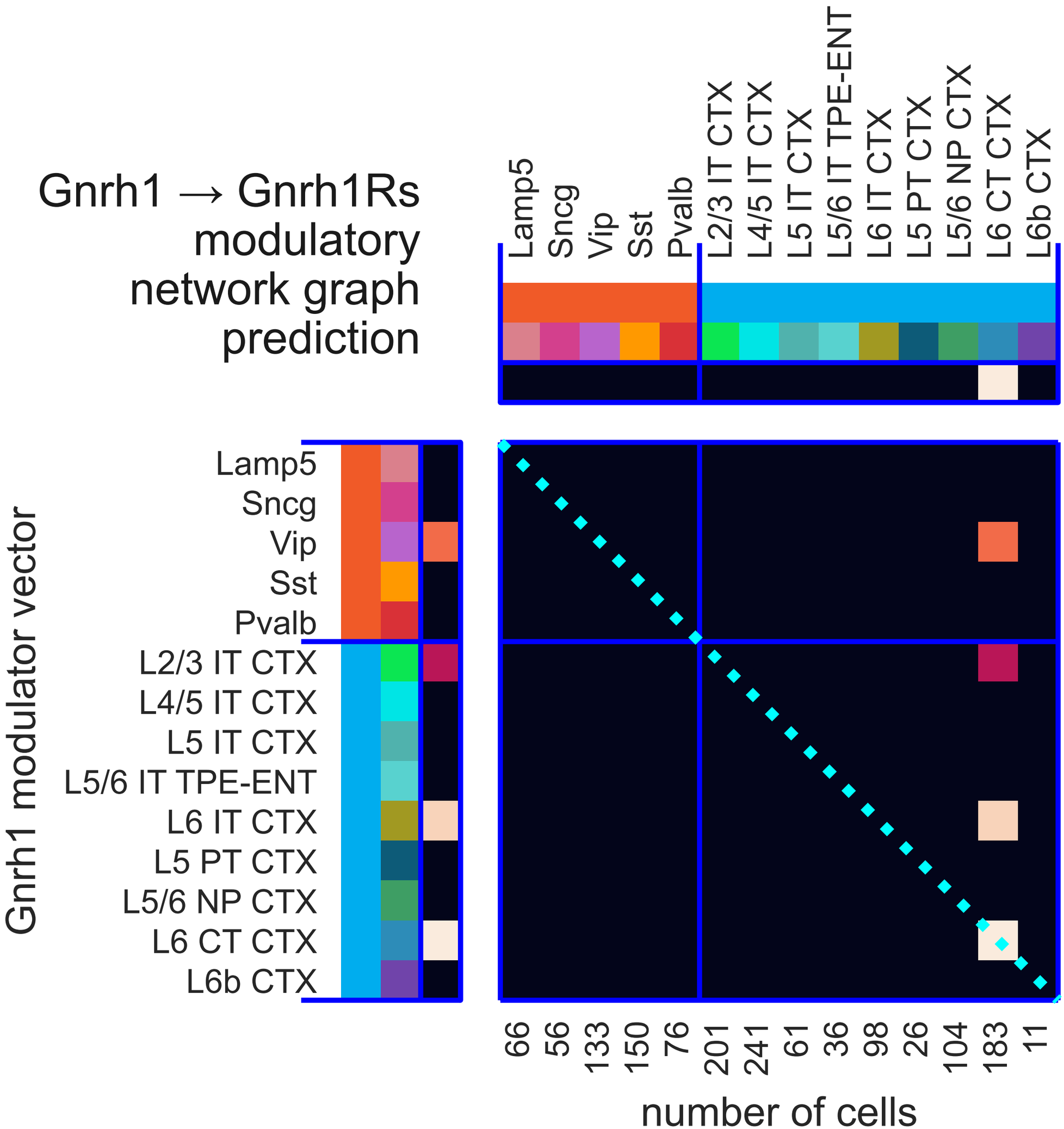
Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

Gnrh1Rs receptor vector

Gnrh1 → Gnrh1Rs
modulatory
network graph
prediction



Gnrh1Rs vector
max: 0.55%
mean: 0.04%

Gnrh1 vector
max: 1.09%
mean: 0.24%

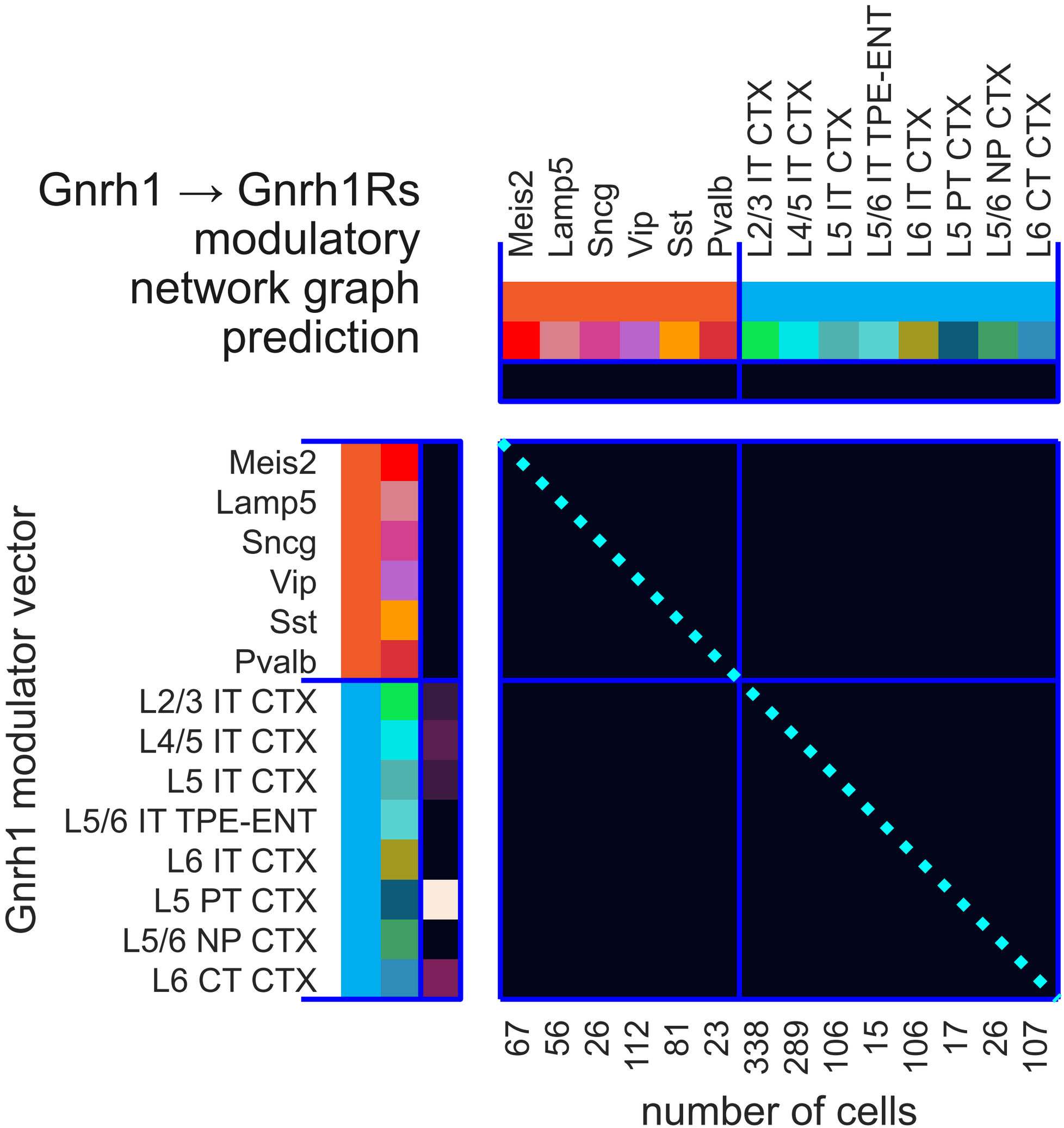
Gnrh1 x Gnrh1Rs
outer product
max: 0.01%
mean: 0.00%

diagonal
max: 0.01%
mean: 0.00%

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

Gnrh1Rs receptor vector

Gnrh1 → Gnrh1Rs
modulatory
network graph
prediction



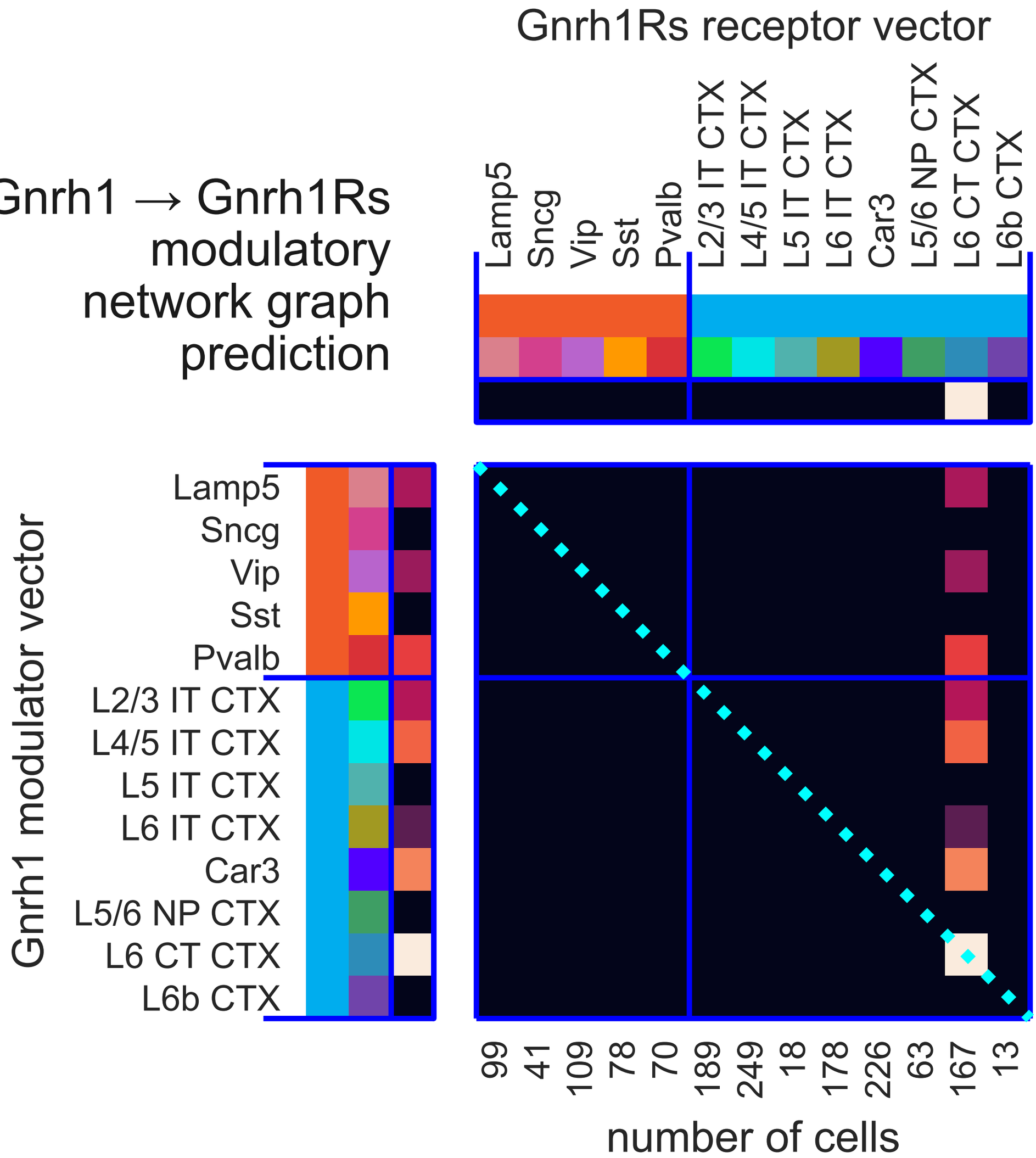
Gnrh1Rs vector
max: 0.00%
mean: 0.00%

Gnrh1 vector
max: 5.88%
mean: 0.78%

Gnrh1 x Gnrh1Rs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



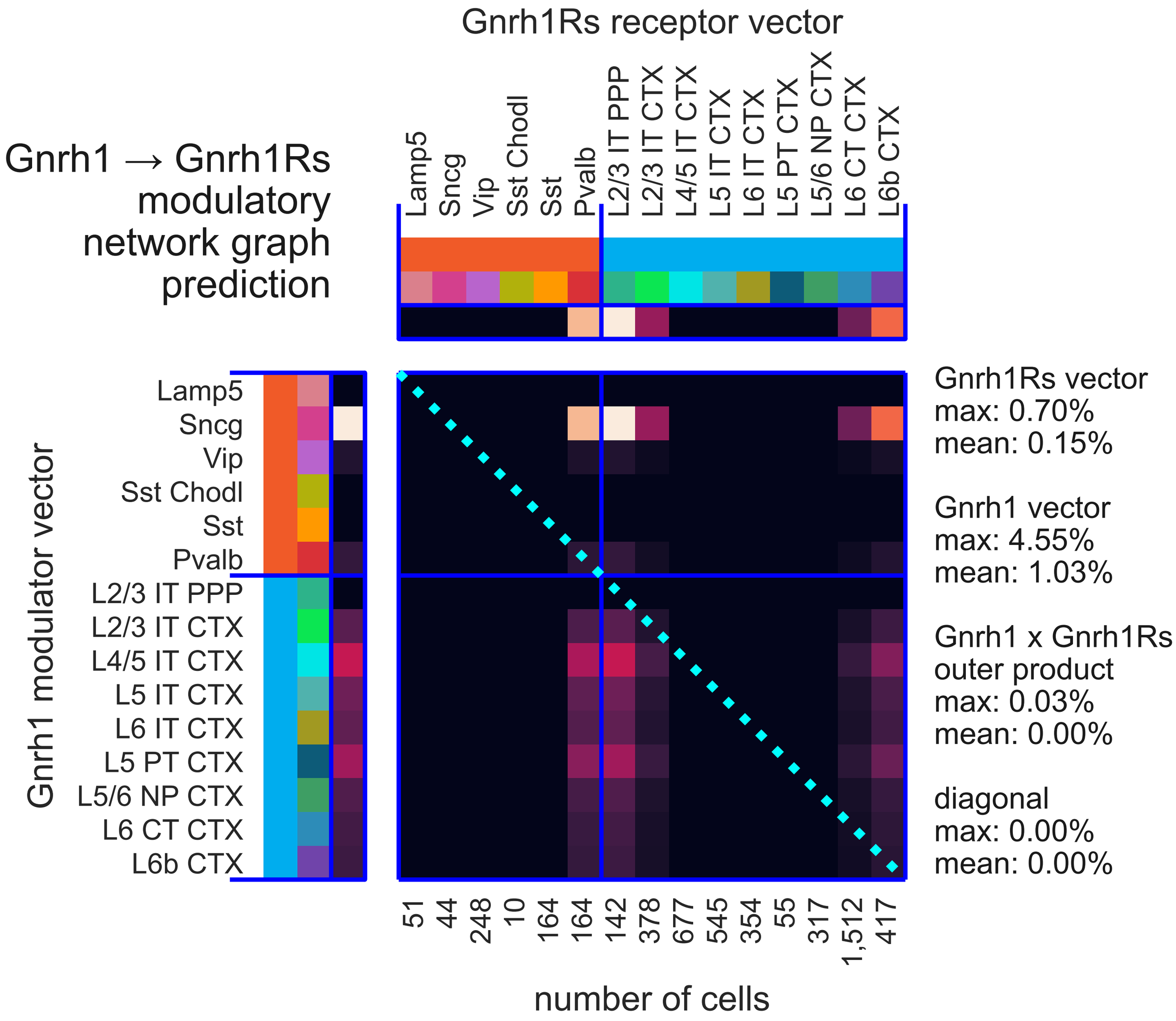
Gnrh1Rs vector
max: 1.20%
mean: 0.09%

Gnrh1 vector
max: 2.40%
mean: 0.83%

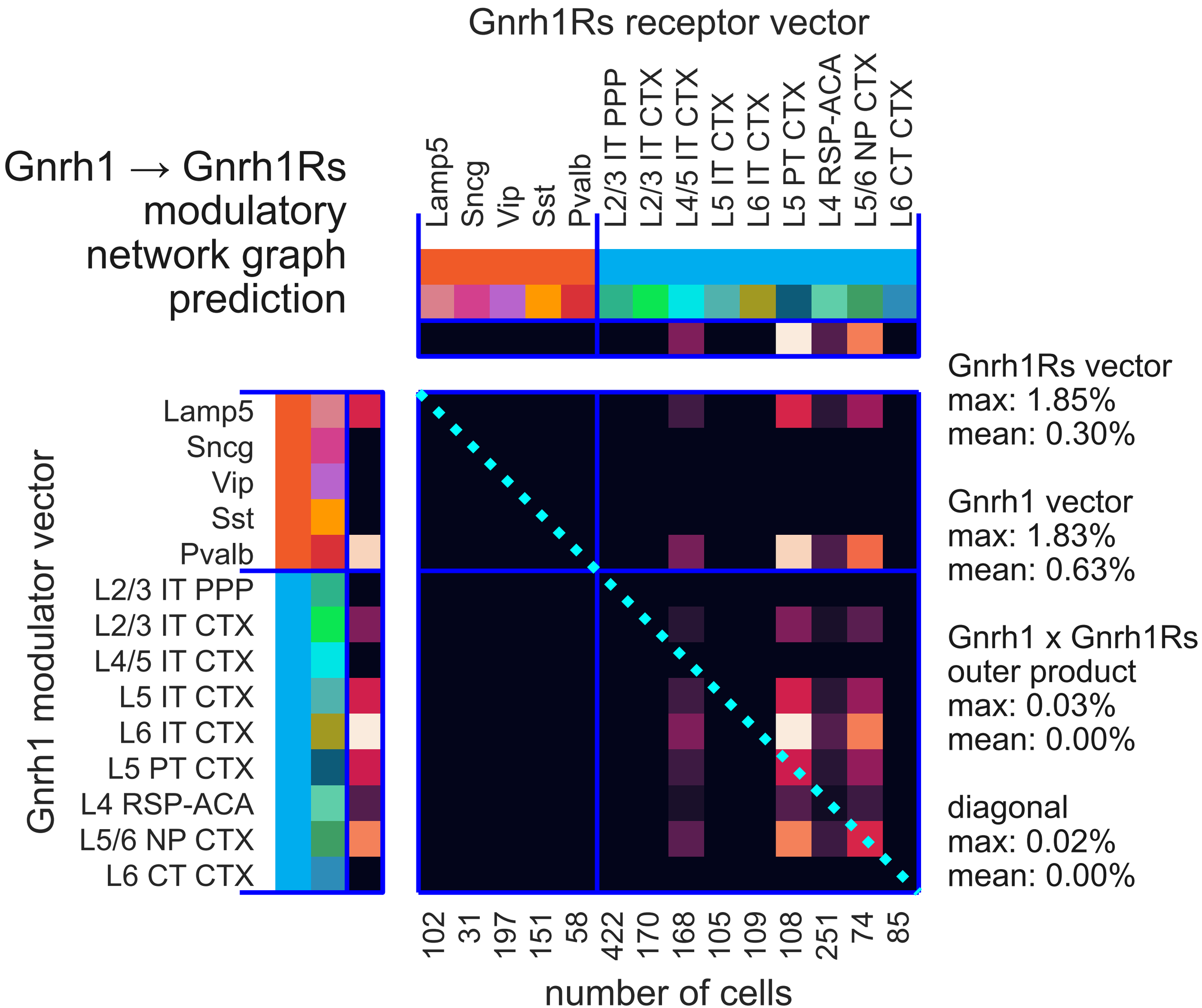
Gnrh1 x Gnrh1Rs
outer product
max: 0.03%
mean: 0.00%

diagonal
max: 0.03%
mean: 0.00%

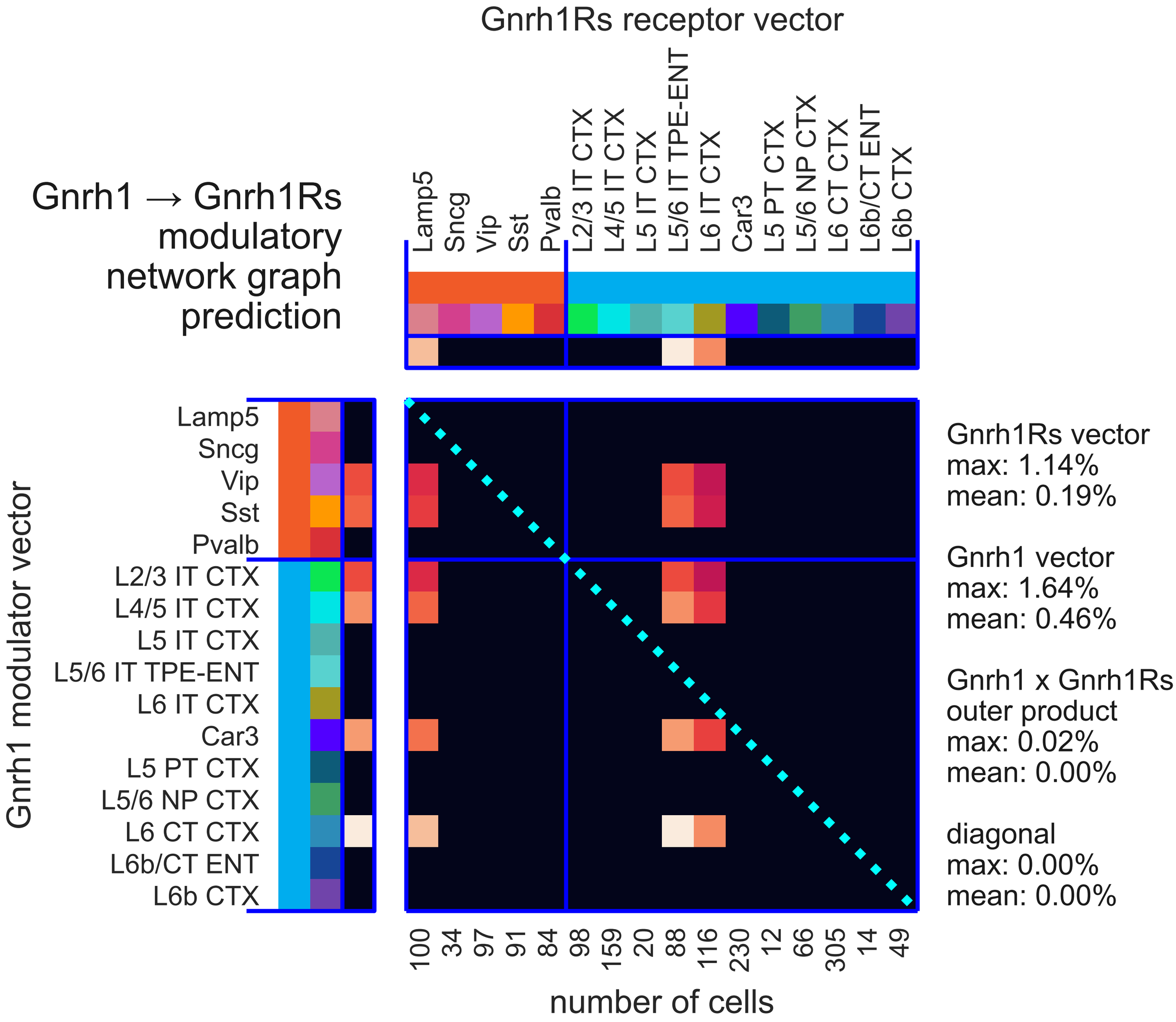
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

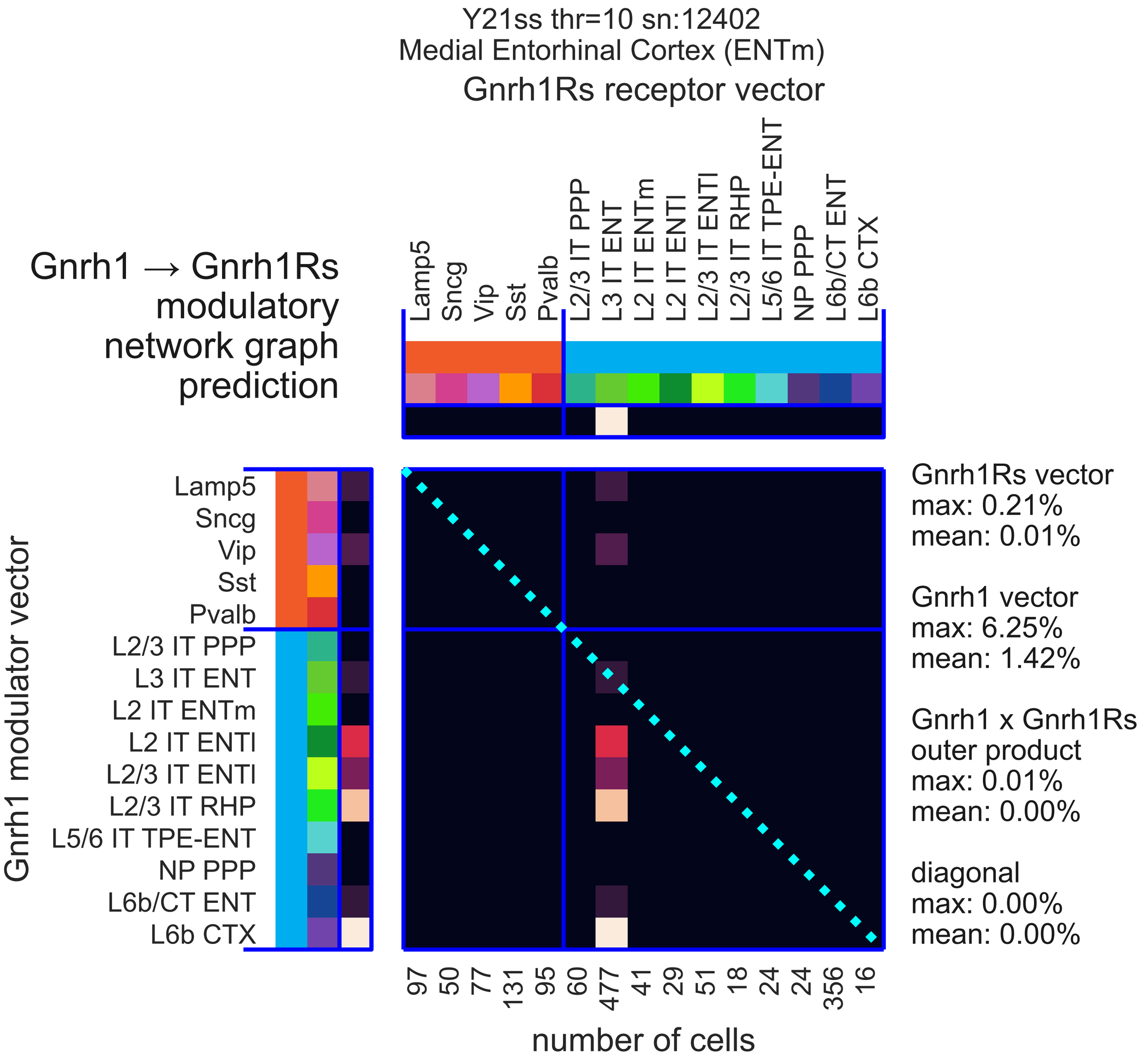


Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)

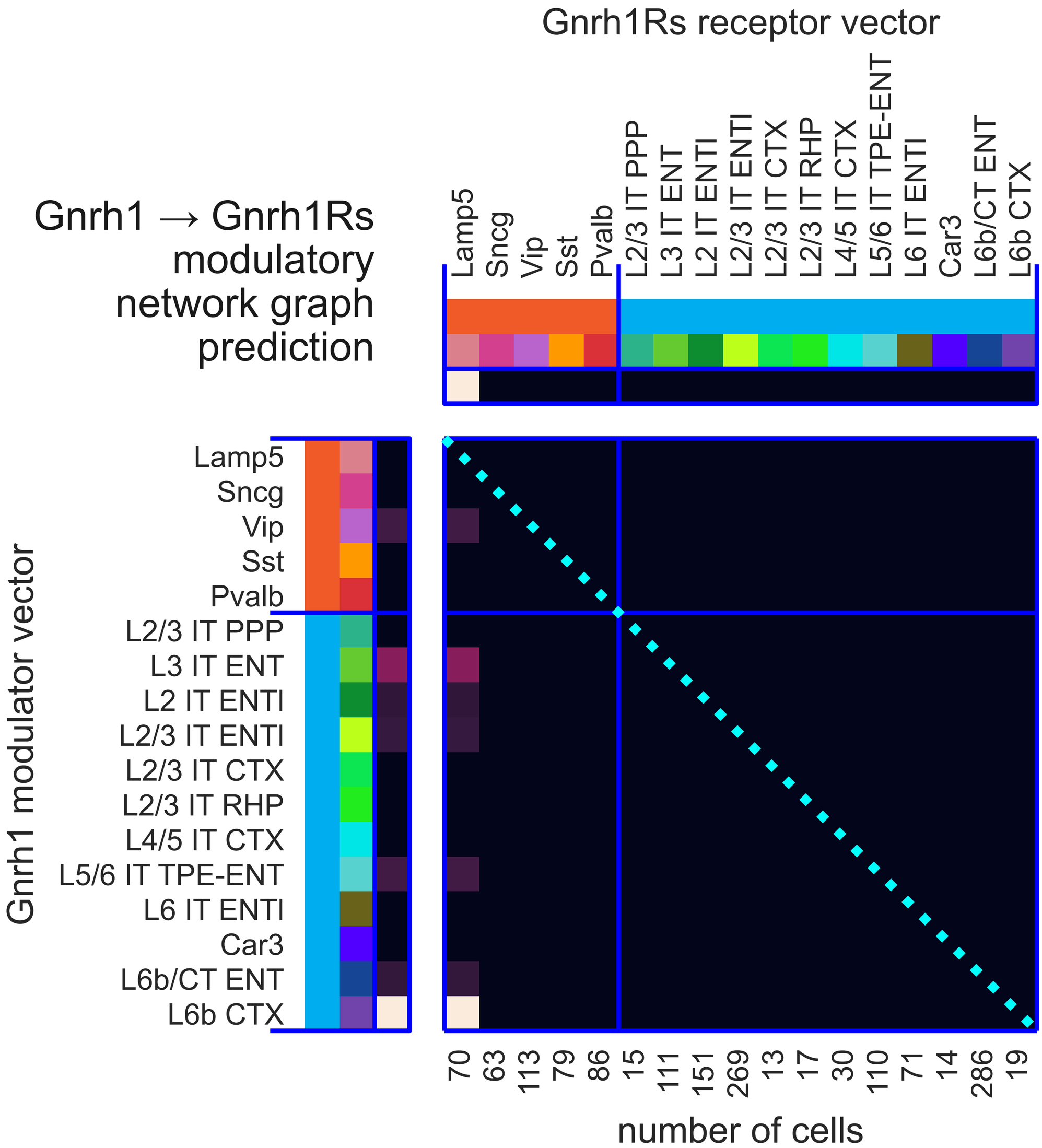


Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)




Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
Gnrh1Rs receptor vector
Gnrh1 → Gnrh1Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Gnrh1 modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
Gnrh1Rs vector
max: 0.21%
mean: 0.01%
Gnrh1 vector
max: 6.25%
mean: 1.42%
Gnrh1 x Gnrh1Rs
outer product
max: 0.01%
mean: 0.00%
diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)



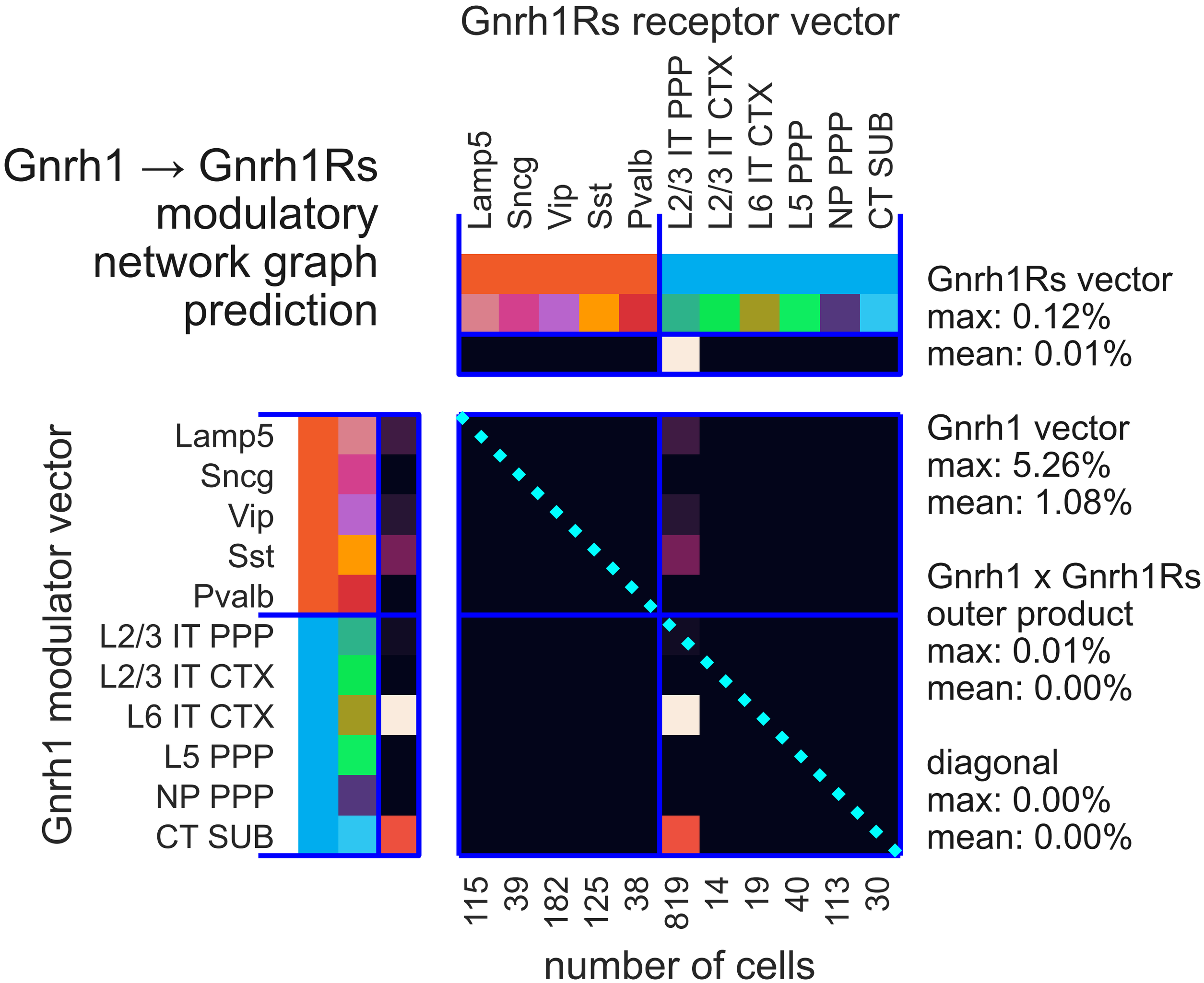
Gnrh1Rs vector
max: 1.43%
mean: 0.08%

Gnrh1 vector
max: 5.26%
mean: 0.64%

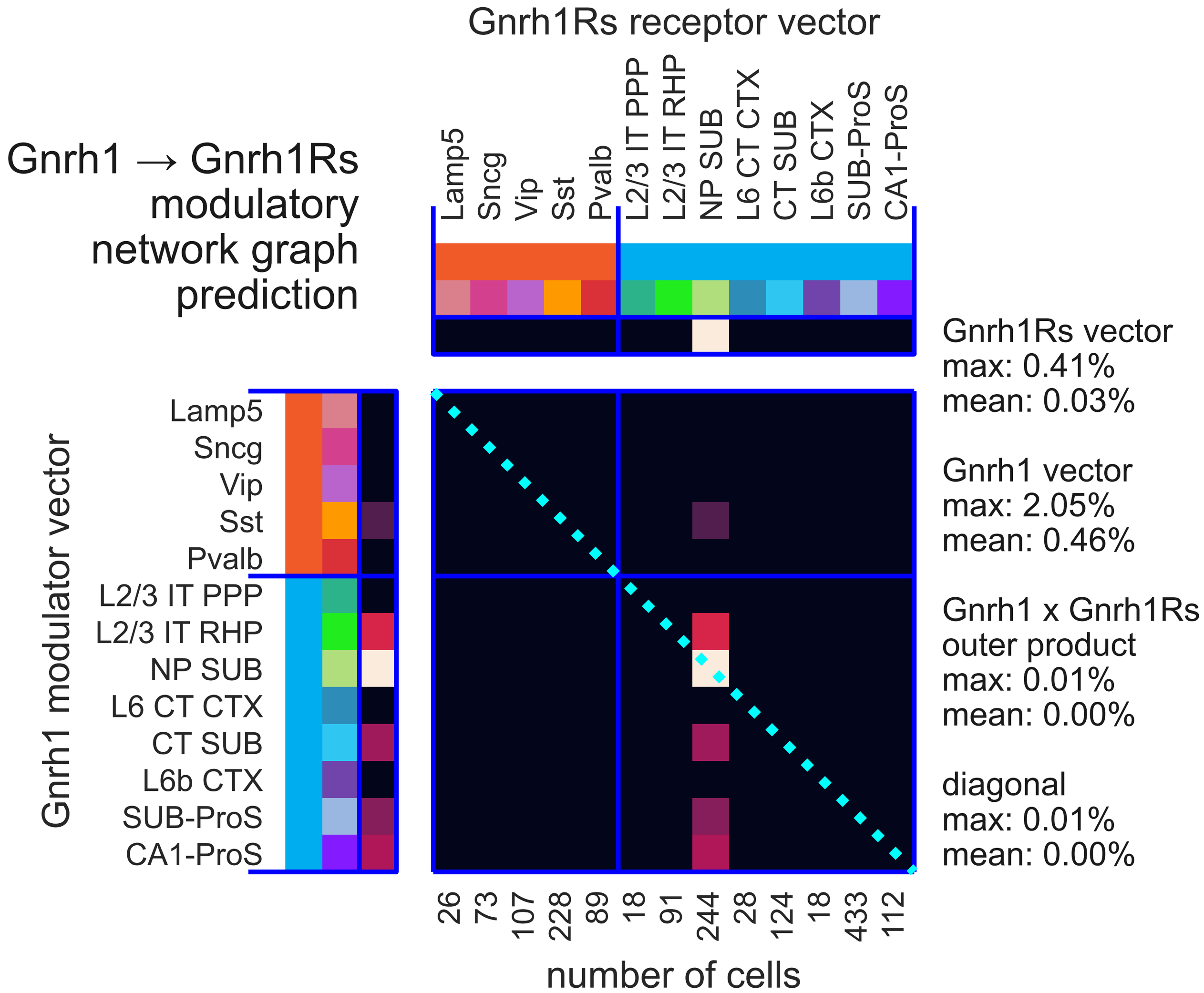
Gnrh1 x Gnrh1Rs
outer product
max: 0.08%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

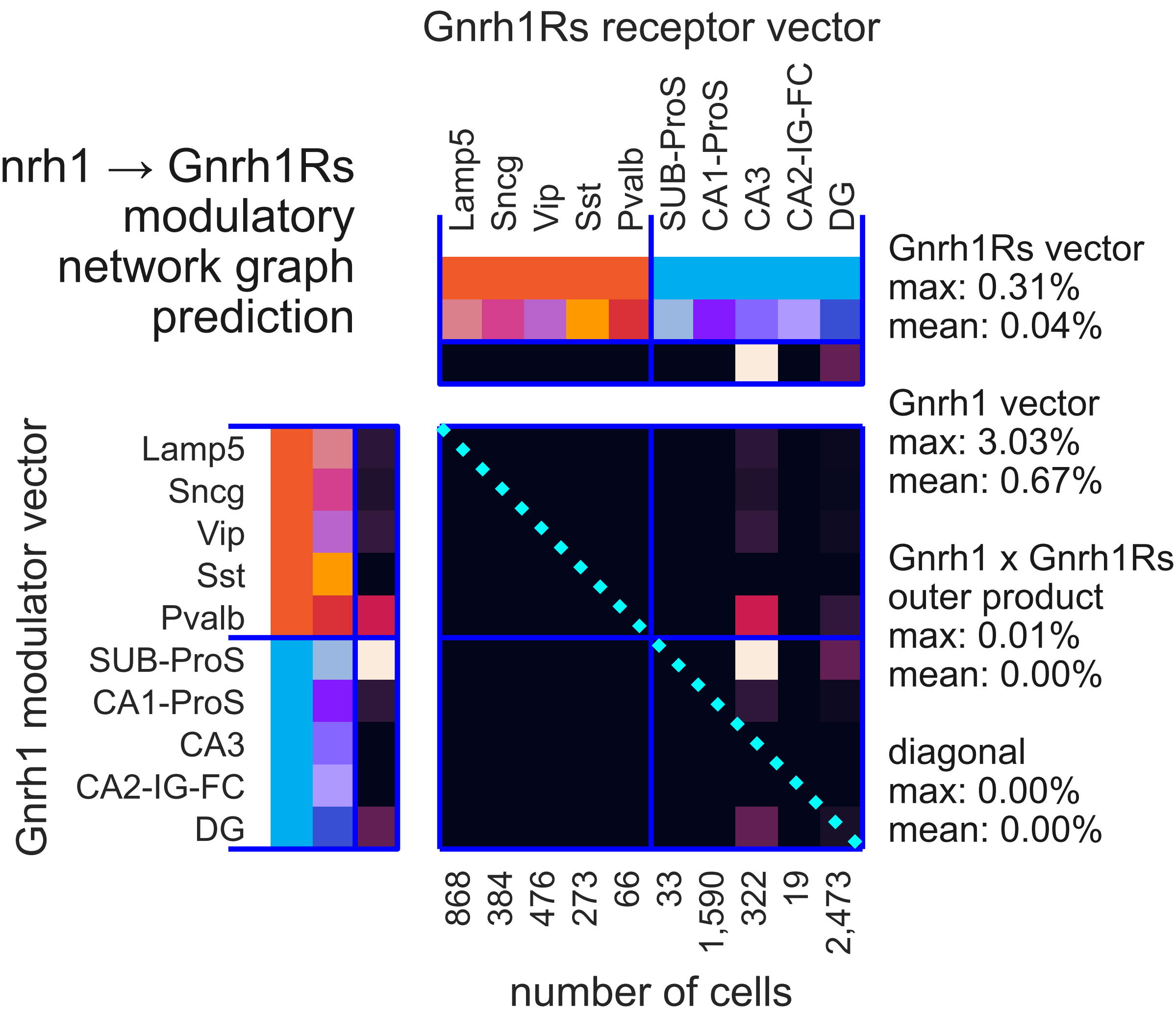
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

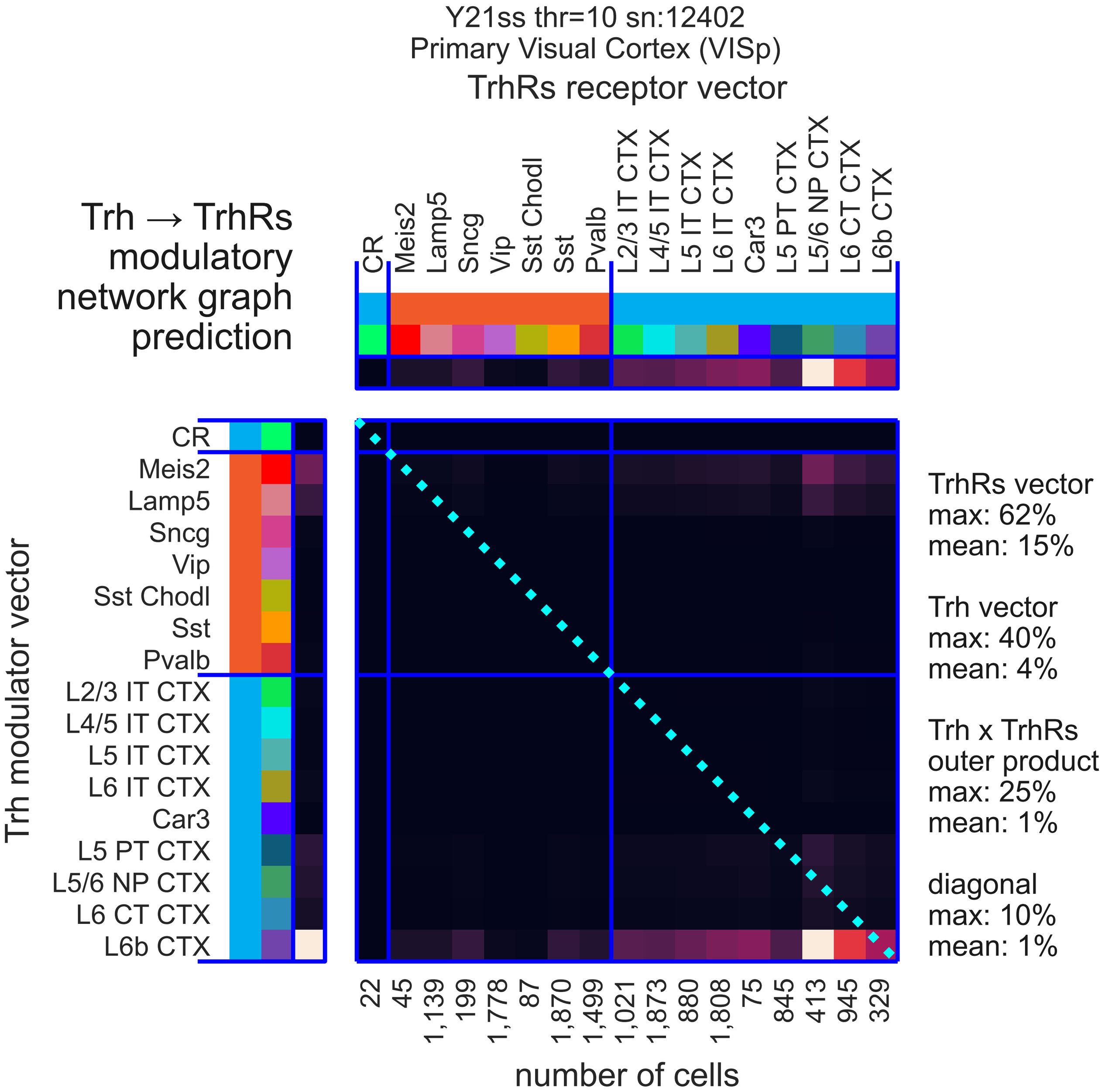


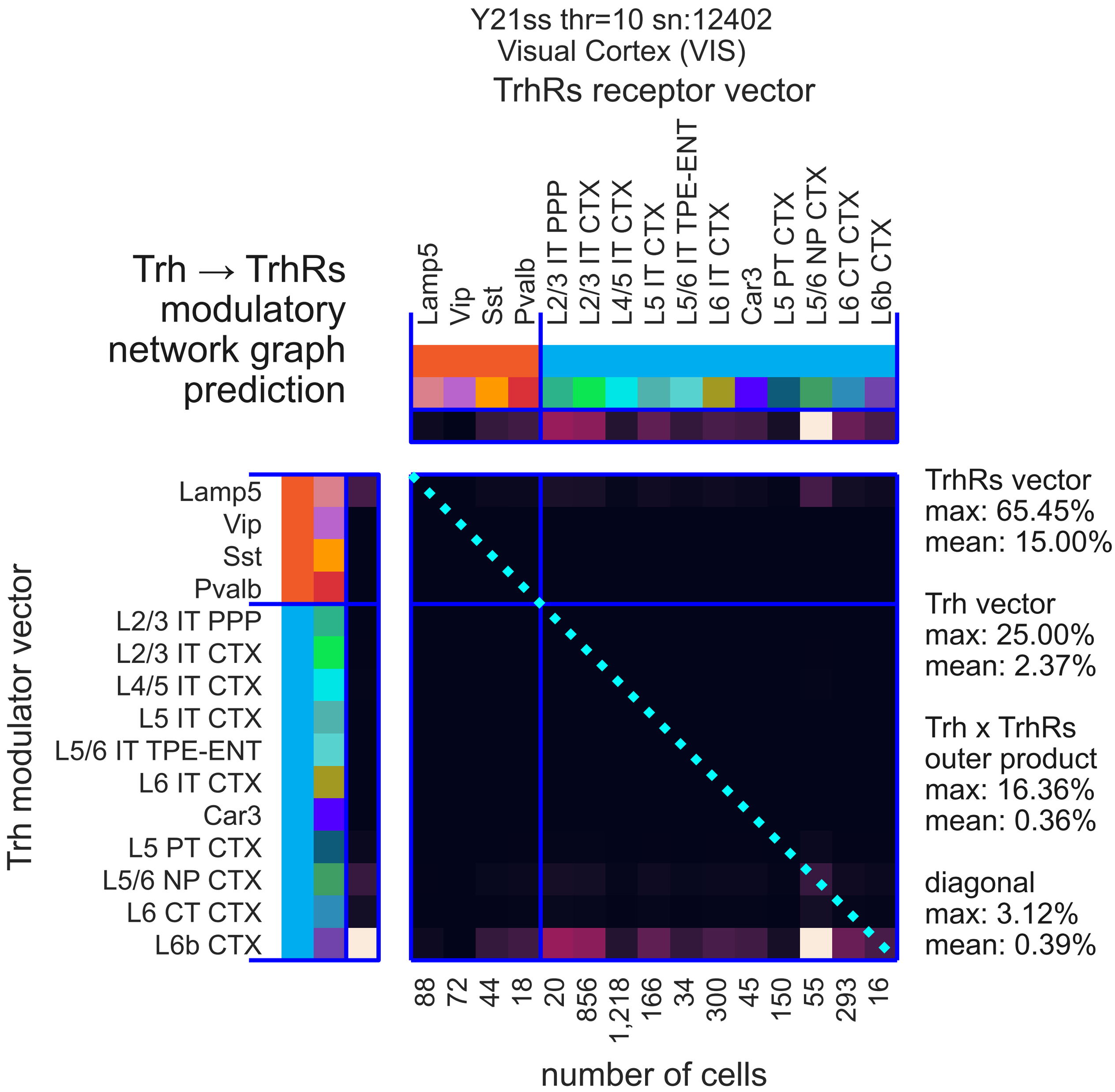
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)

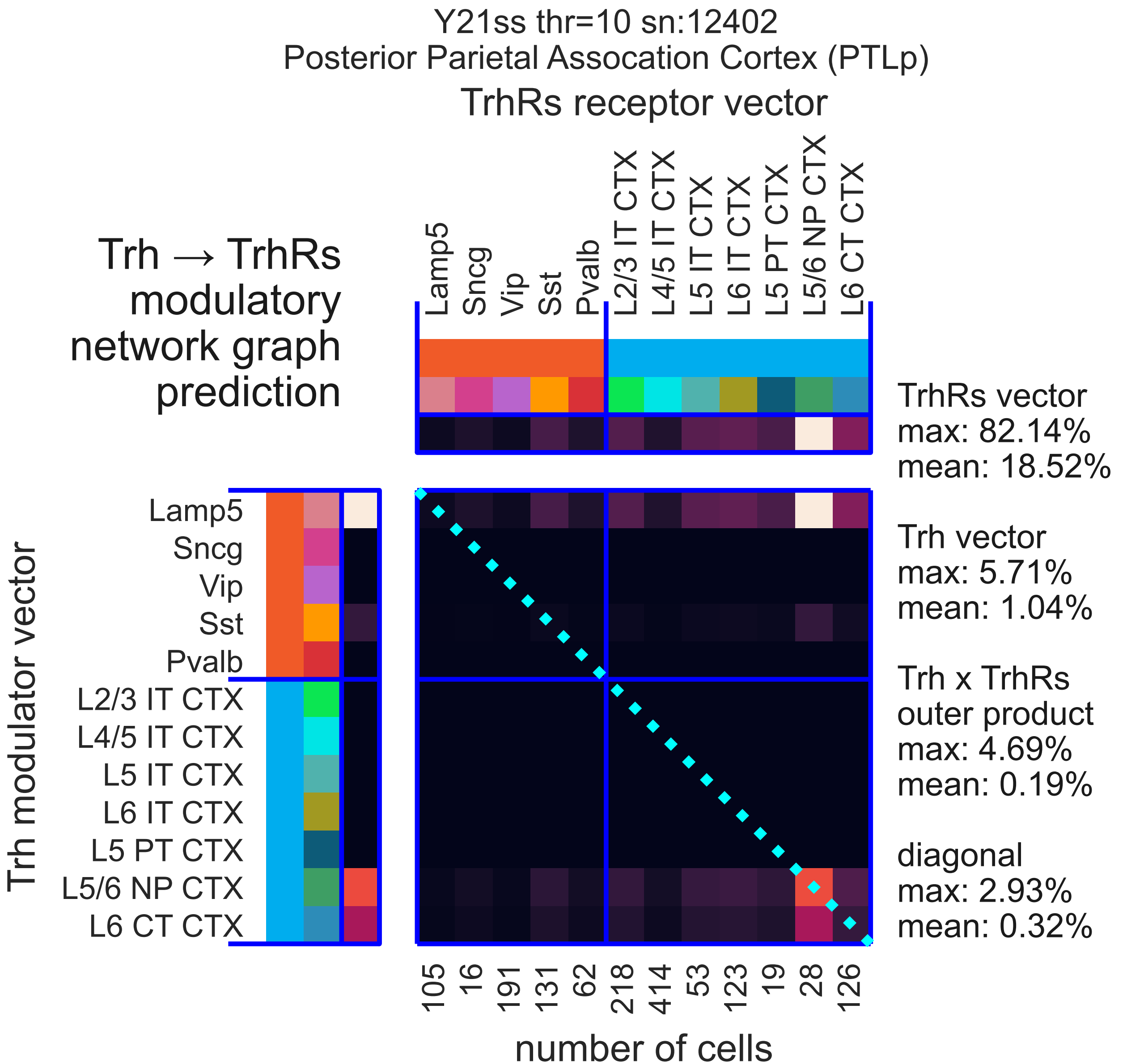


Y21ss thr=10 sn:12402
Hippocampus (HIP)

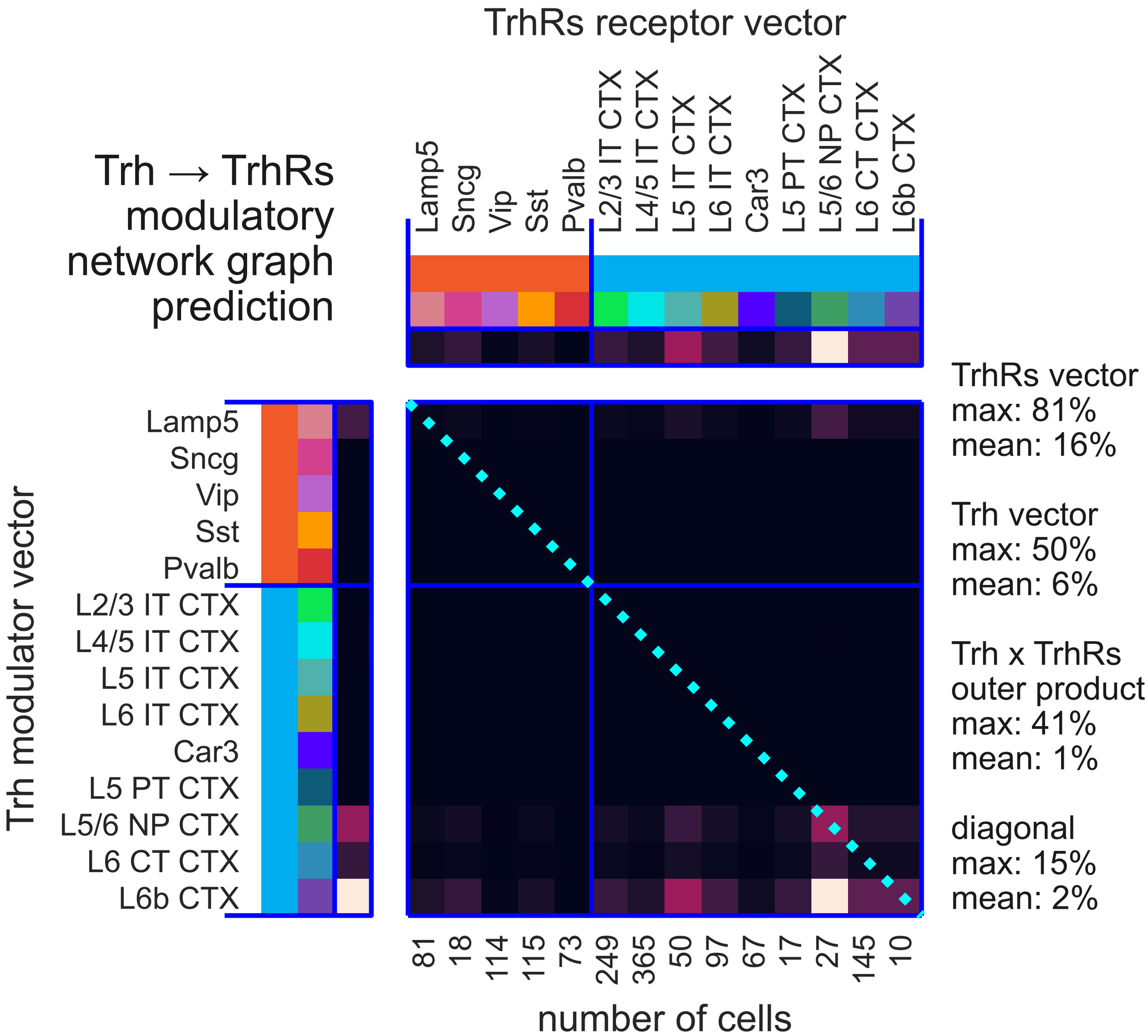



Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
TrhRs receptor vector
Trh → TrhRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Trh modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
TrhRs vector
max: 62%
mean: 15%
Trh vector
max: 40%
mean: 4%
Trh x TrhRs
outer product
max: 25%
mean: 1%
diagonal
max: 10%
mean: 1%

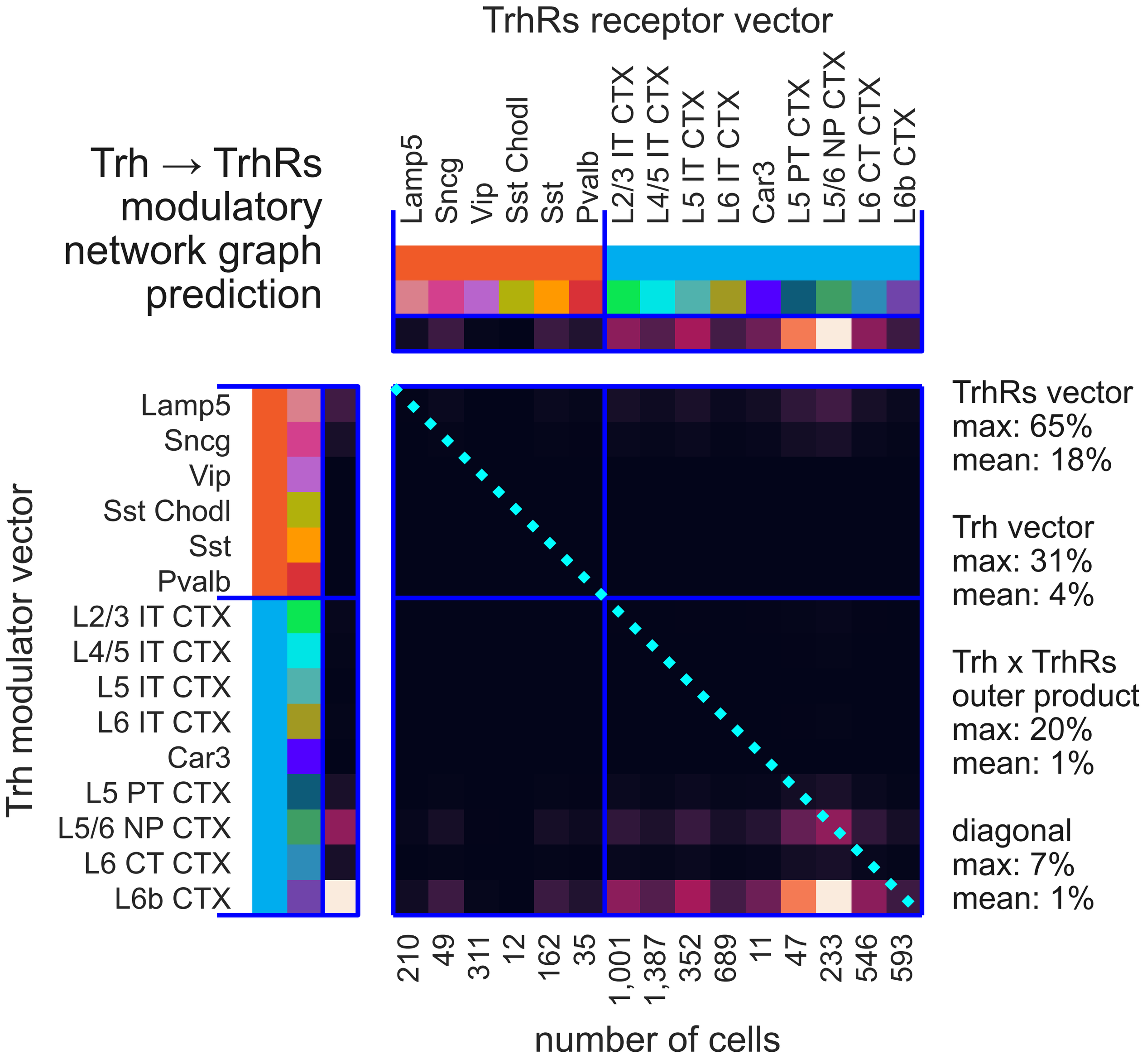

Y21ss thr=10 sn:12402
Visual Cortex (VIS)
TrhRs receptor vector
Trh → TrhRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Trh modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
TrhRs vector
max: 65.45%
mean: 15.00%
Trh vector
max: 25.00%
mean: 2.37%
Trh x TrhRs
outer product
max: 16.36%
mean: 0.36%
diagonal
max: 3.12%
mean: 0.39%


Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)
TrhRs receptor vector
Trh → TrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
TrhRs vector
max: 82.14%
mean: 18.52%
Trh modulator vector
Trh vector
max: 5.71%
mean: 1.04%
Trh x TrhRs
outer product
max: 4.69%
mean: 0.19%
diagonal
max: 2.93%
mean: 0.32%
105
16
191
131
62
218
414
53
123
19
28
126
number of cells

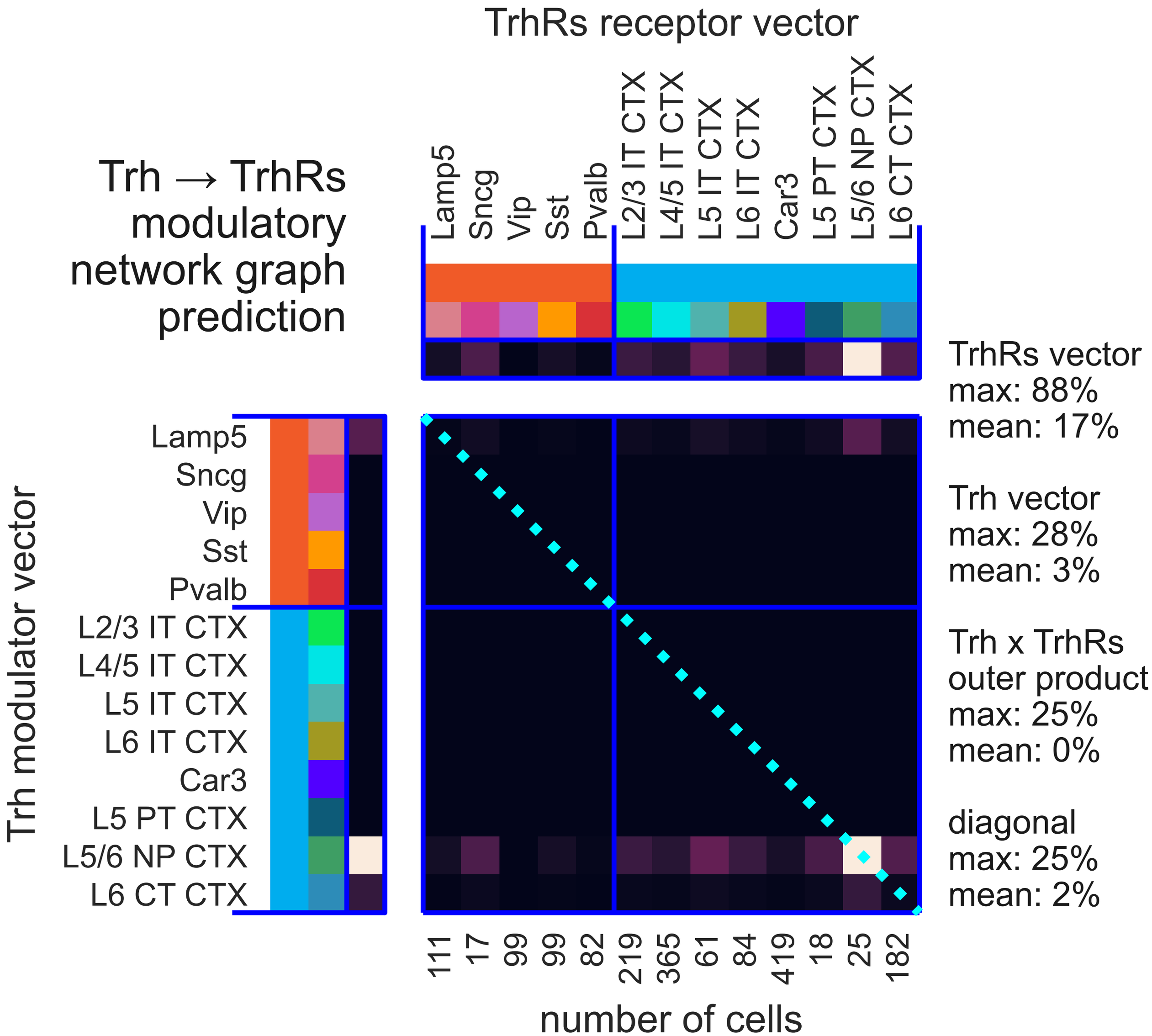
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

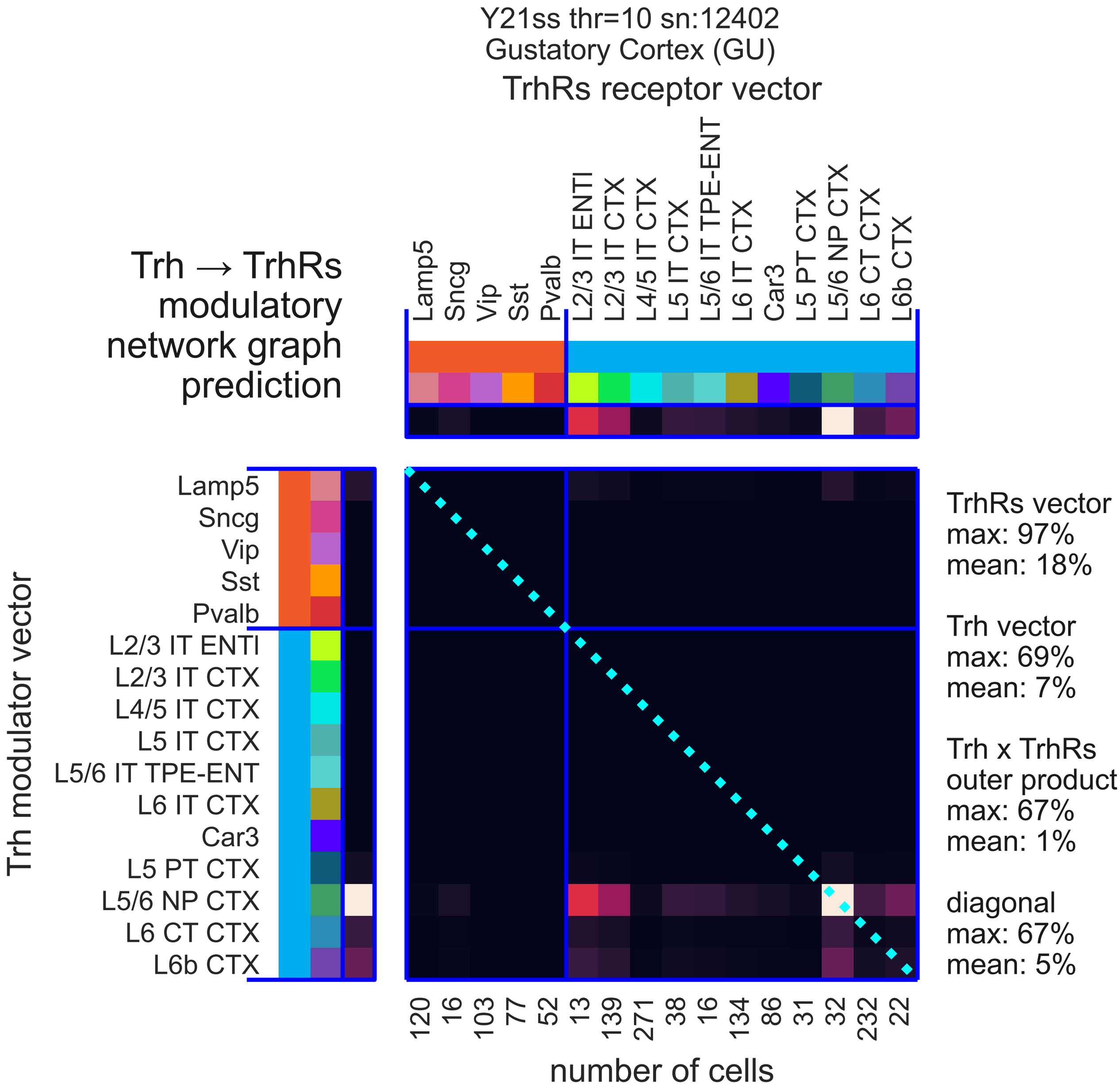


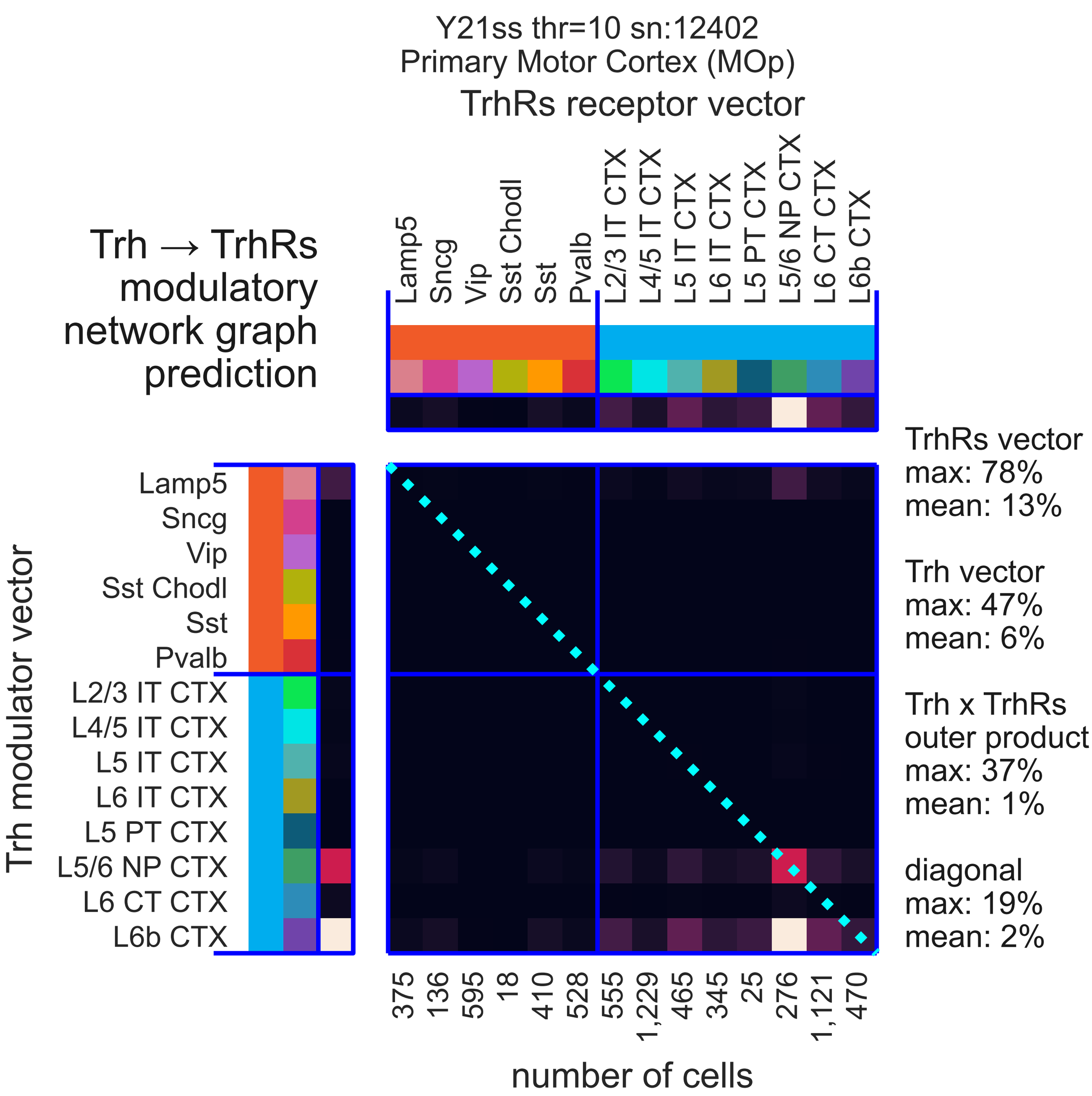
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



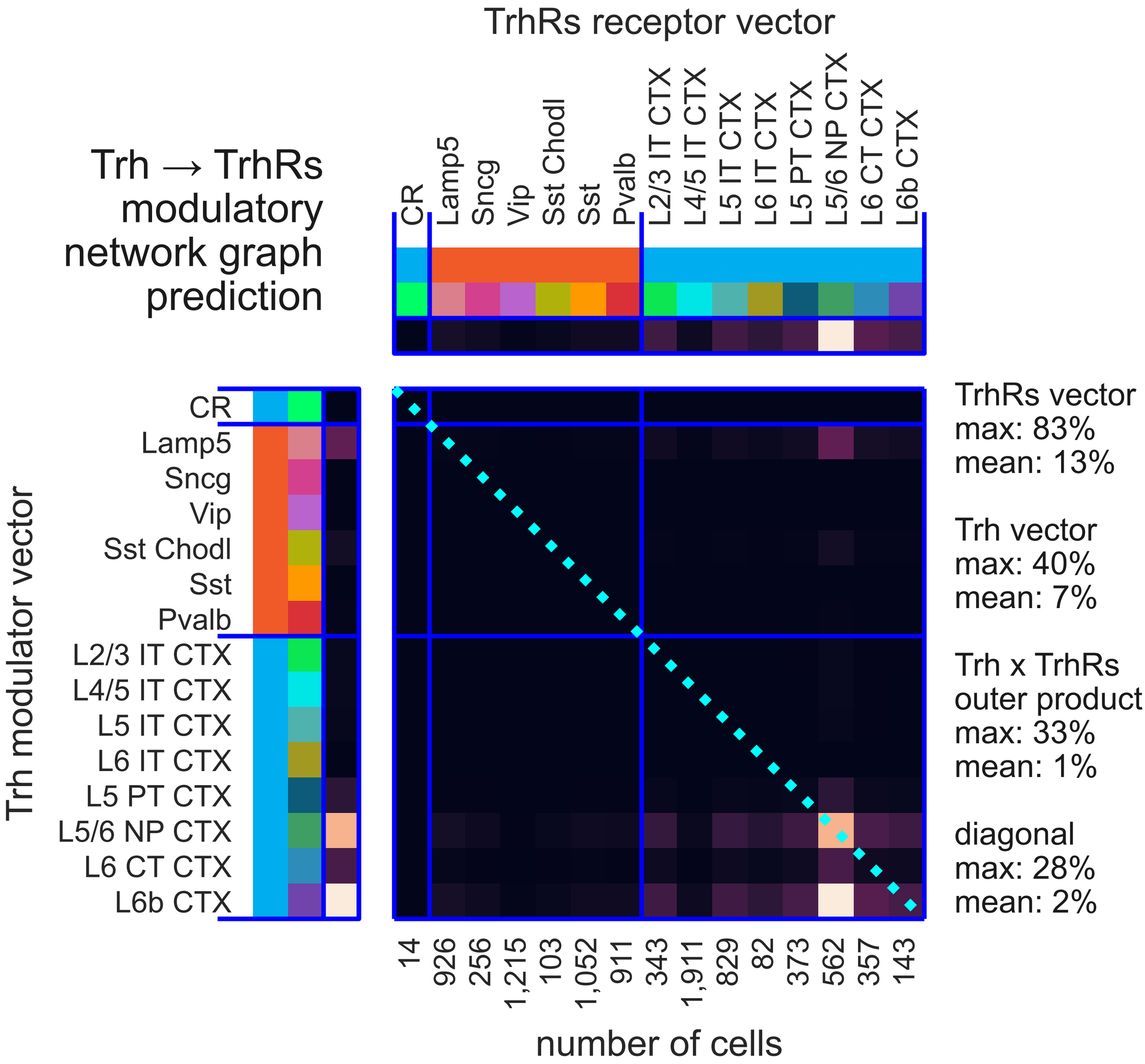
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



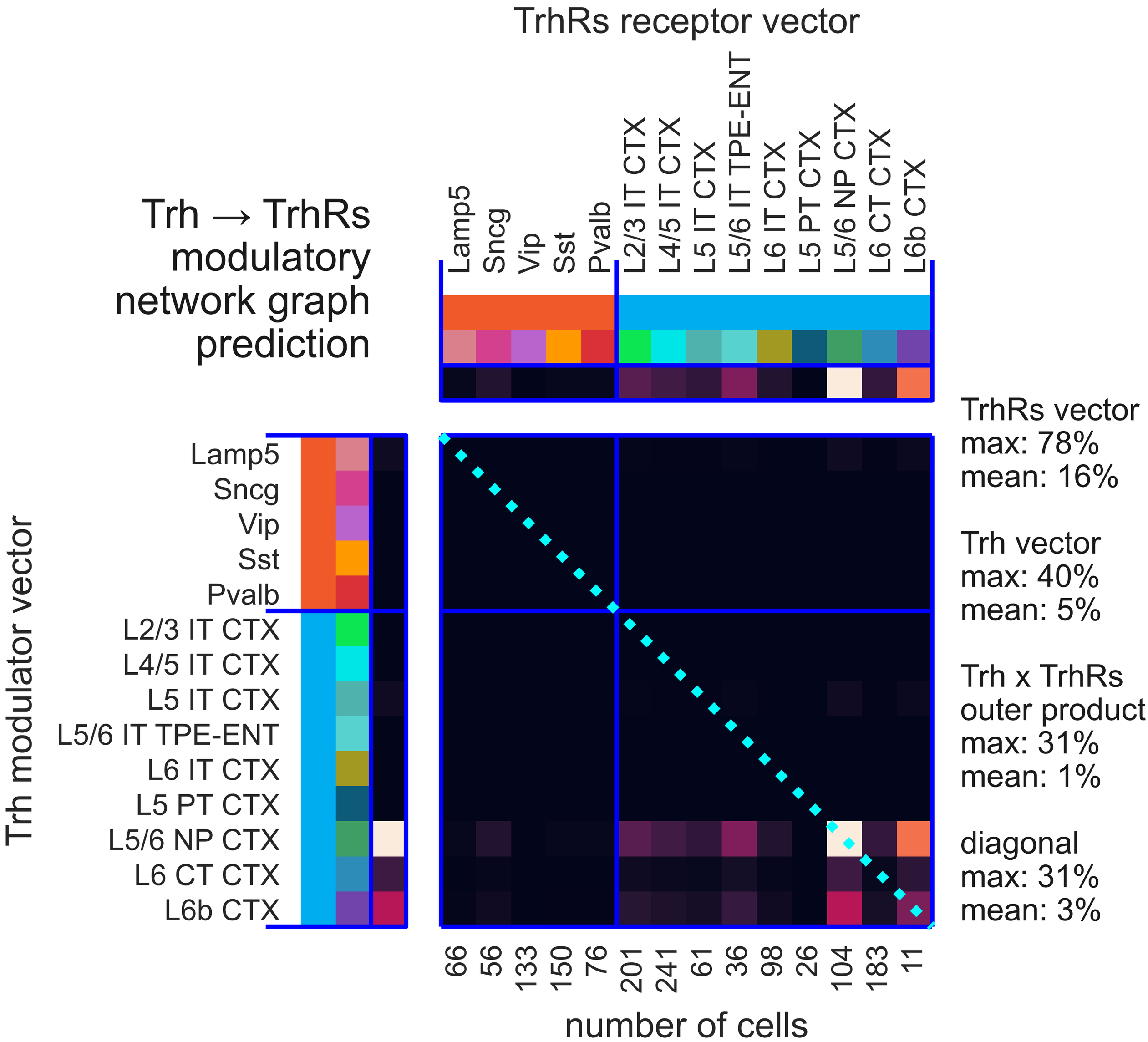

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
TrhRs receptor vector
Trh → TrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Trh modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
TrhRs vector
max: 97%
mean: 18%
Trh vector
max: 69%
mean: 7%
Trh x TrhRs
outer product
max: 67%
mean: 1%
diagonal
max: 67%
mean: 5%

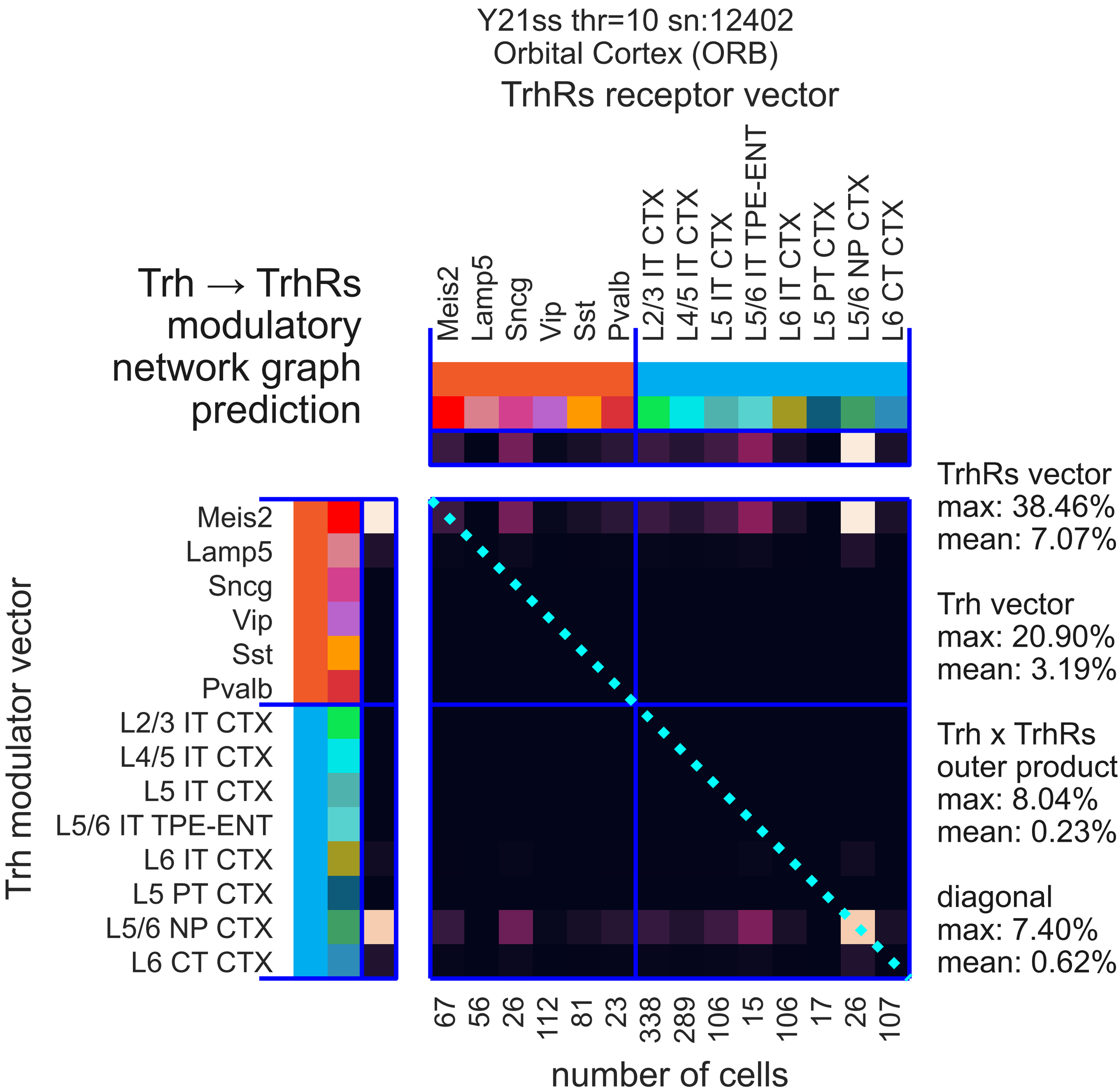

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
TrhRs receptor vector
Trh → TrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Trh modulator vector
TrhRs vector
max: 78%
mean: 13%
Trh vector
max: 47%
mean: 6%
Trh x TrhRs
outer product
max: 37%
mean: 1%
diagonal
max: 19%
mean: 2%
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

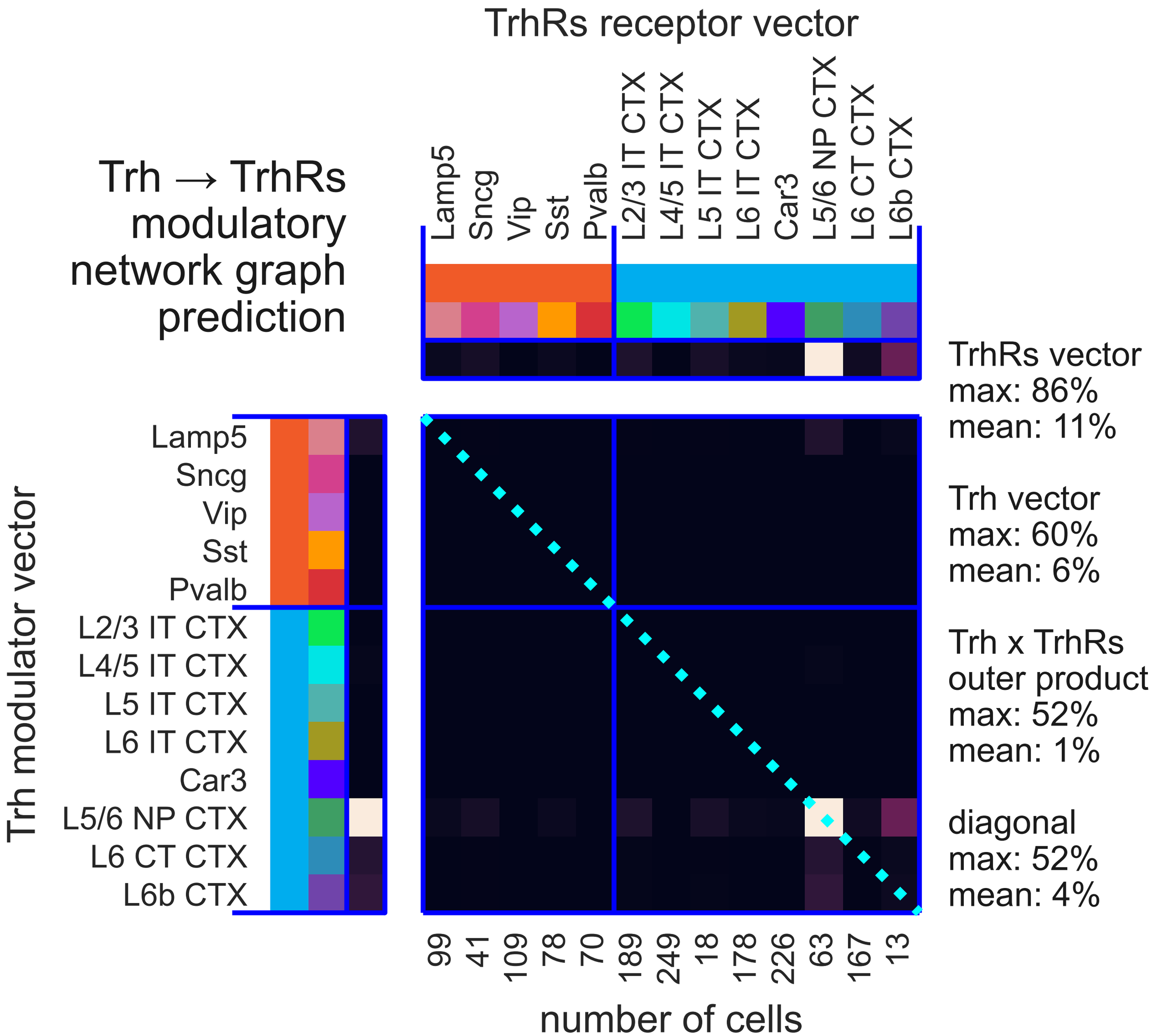


Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

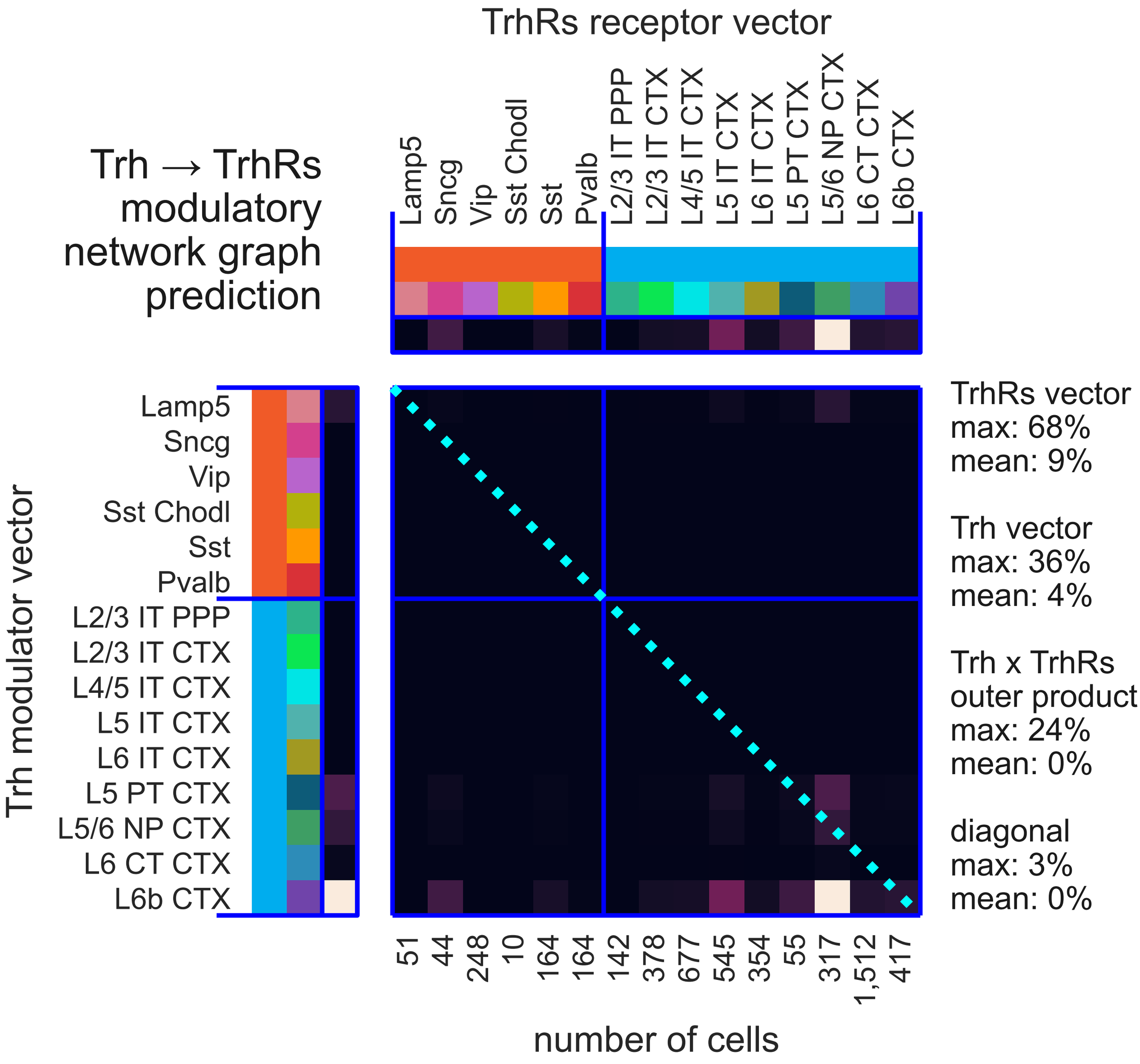


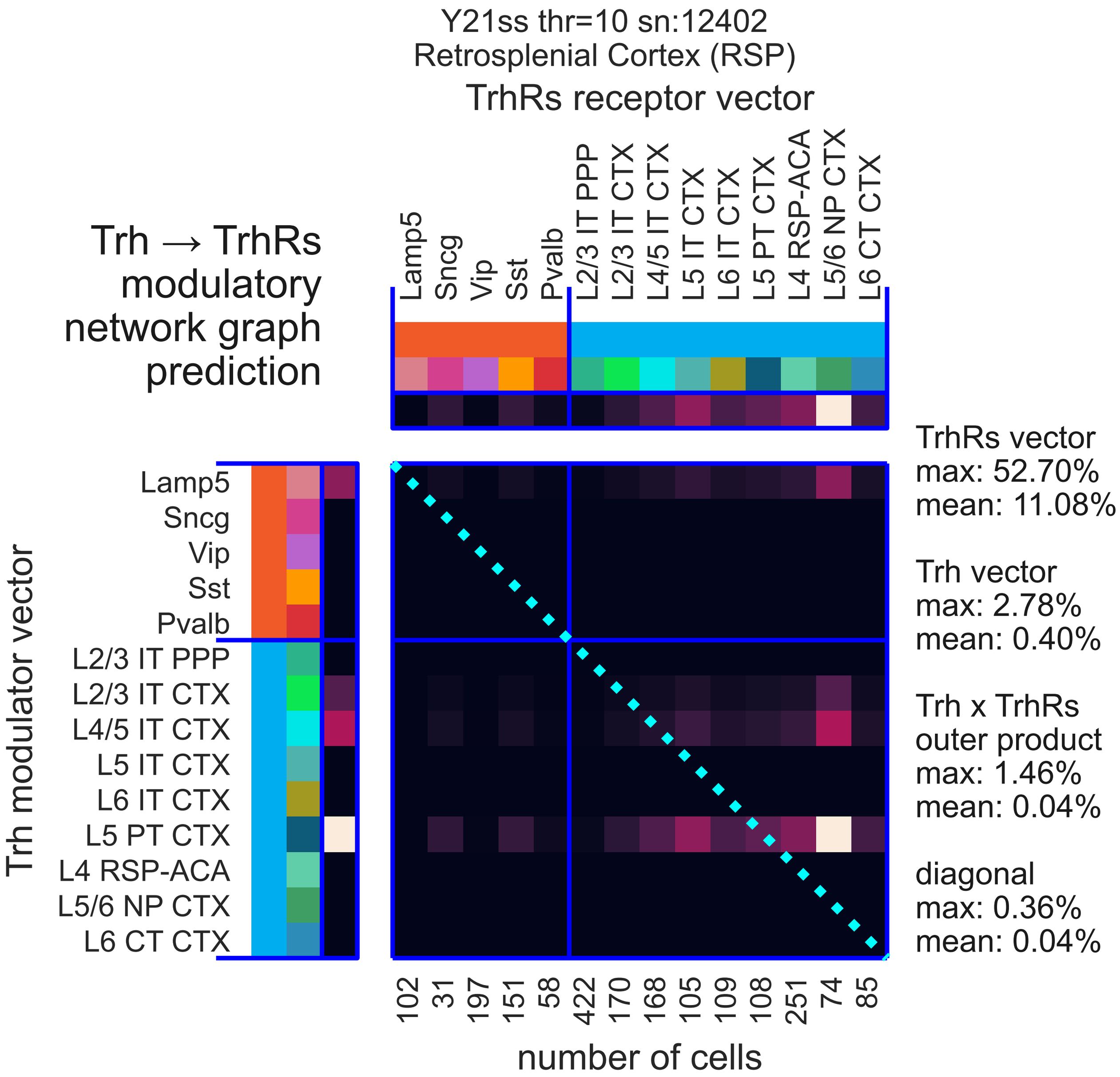

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
TrhRs receptor vector
Trh → TrhRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Trh modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
TrhRs vector
max: 38.46%
mean: 7.07%
Trh vector
max: 20.90%
mean: 3.19%
Trh x TrhRs
outer product
max: 8.04%
mean: 0.23%
diagonal
max: 7.40%
mean: 0.62%

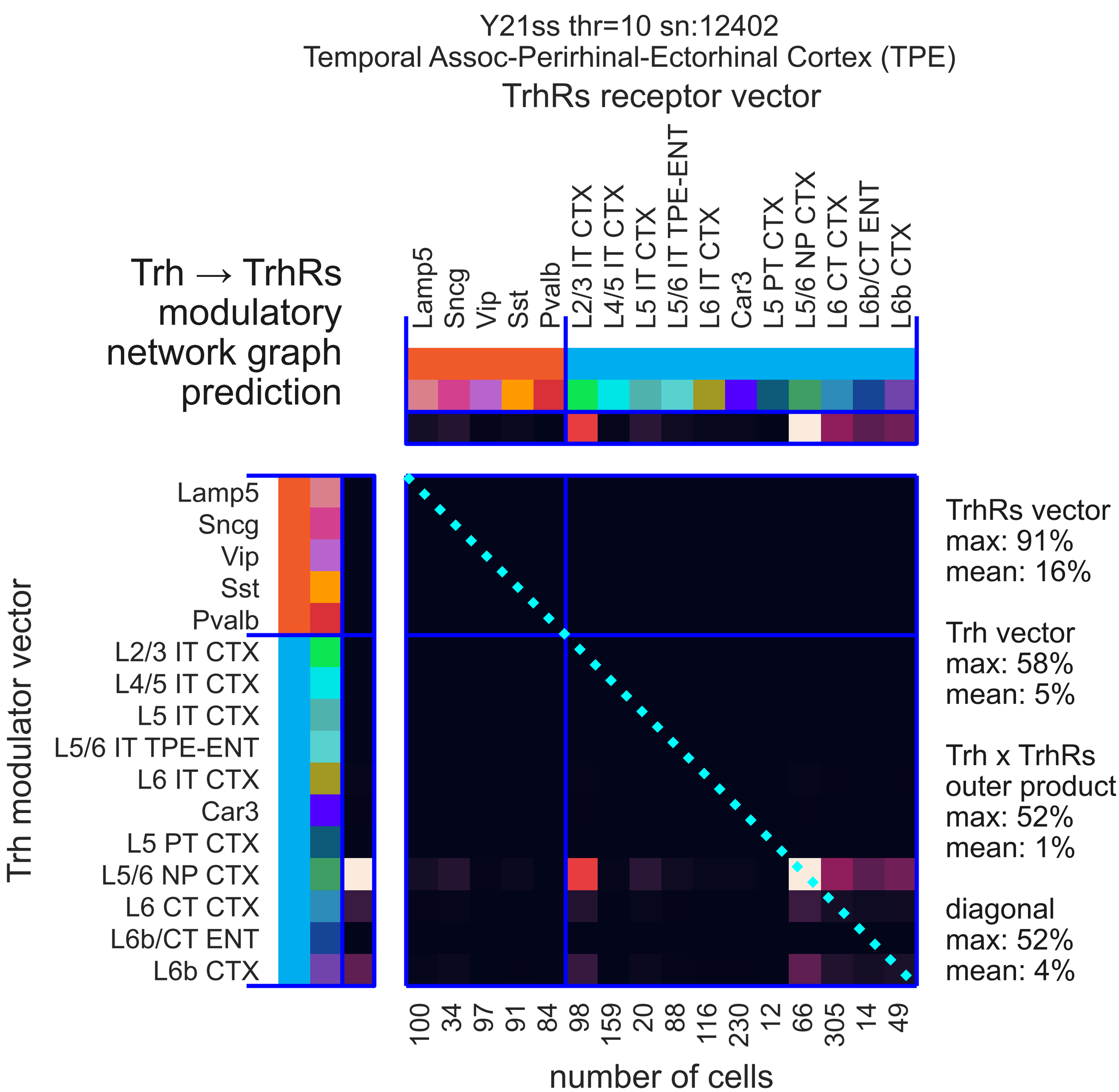
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



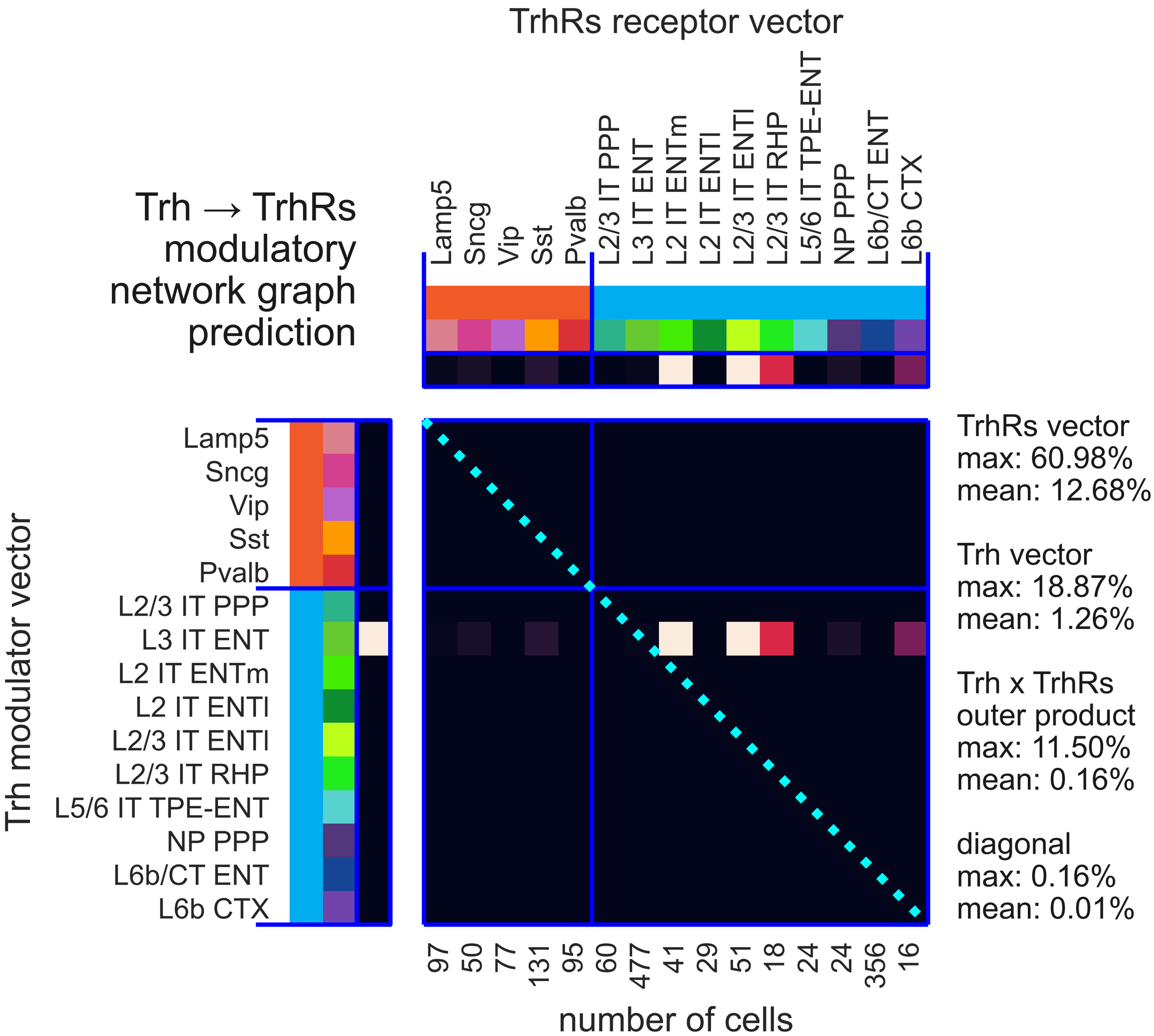
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

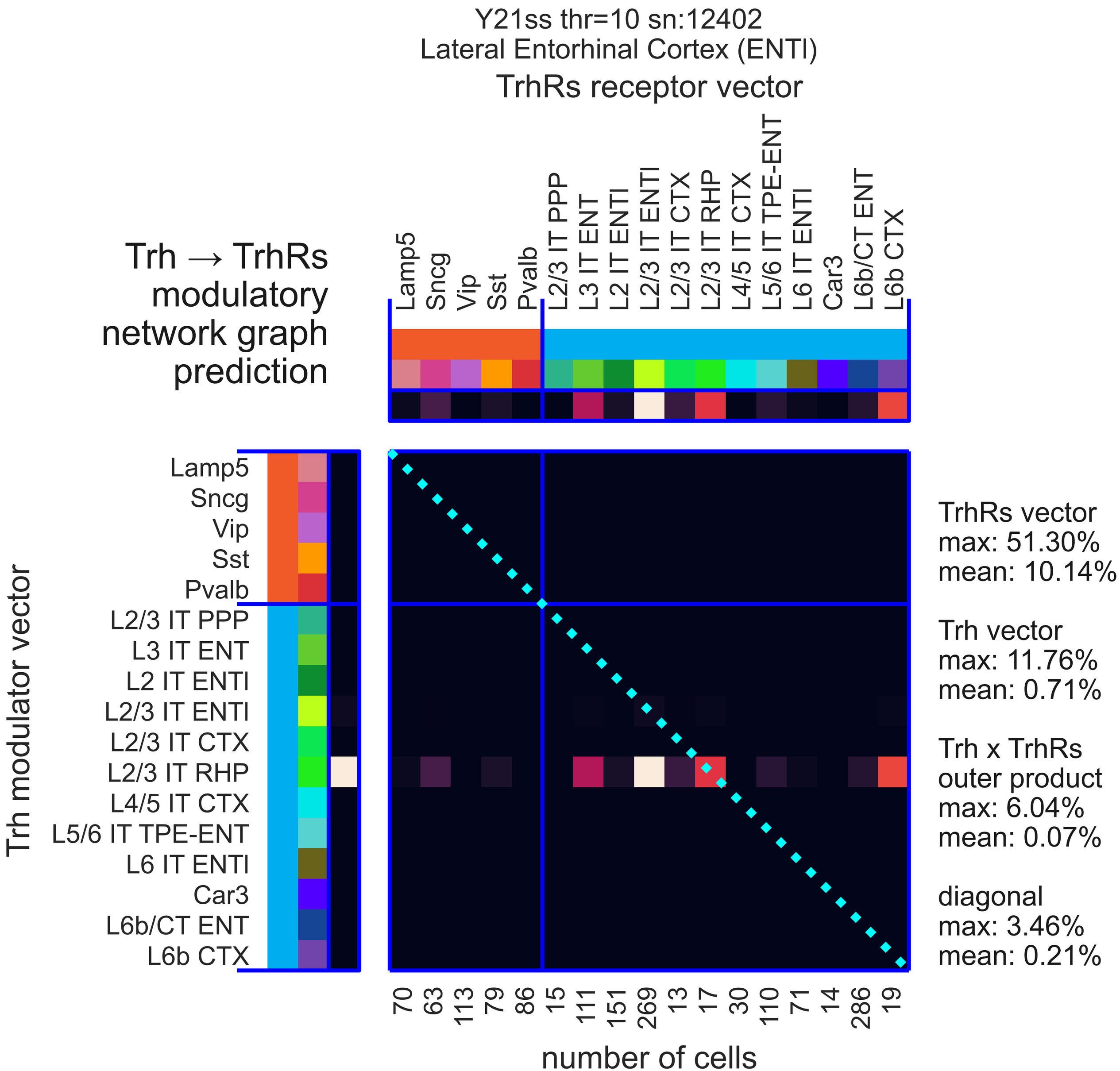



Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
TrhRs receptor vector
Trh → TrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Trh modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
TrhRs vector
max: 52.70%
mean: 11.08%
Trh vector
max: 2.78%
mean: 0.40%
Trh x TrhRs
outer product
max: 1.46%
mean: 0.04%
diagonal
max: 0.36%
mean: 0.04%

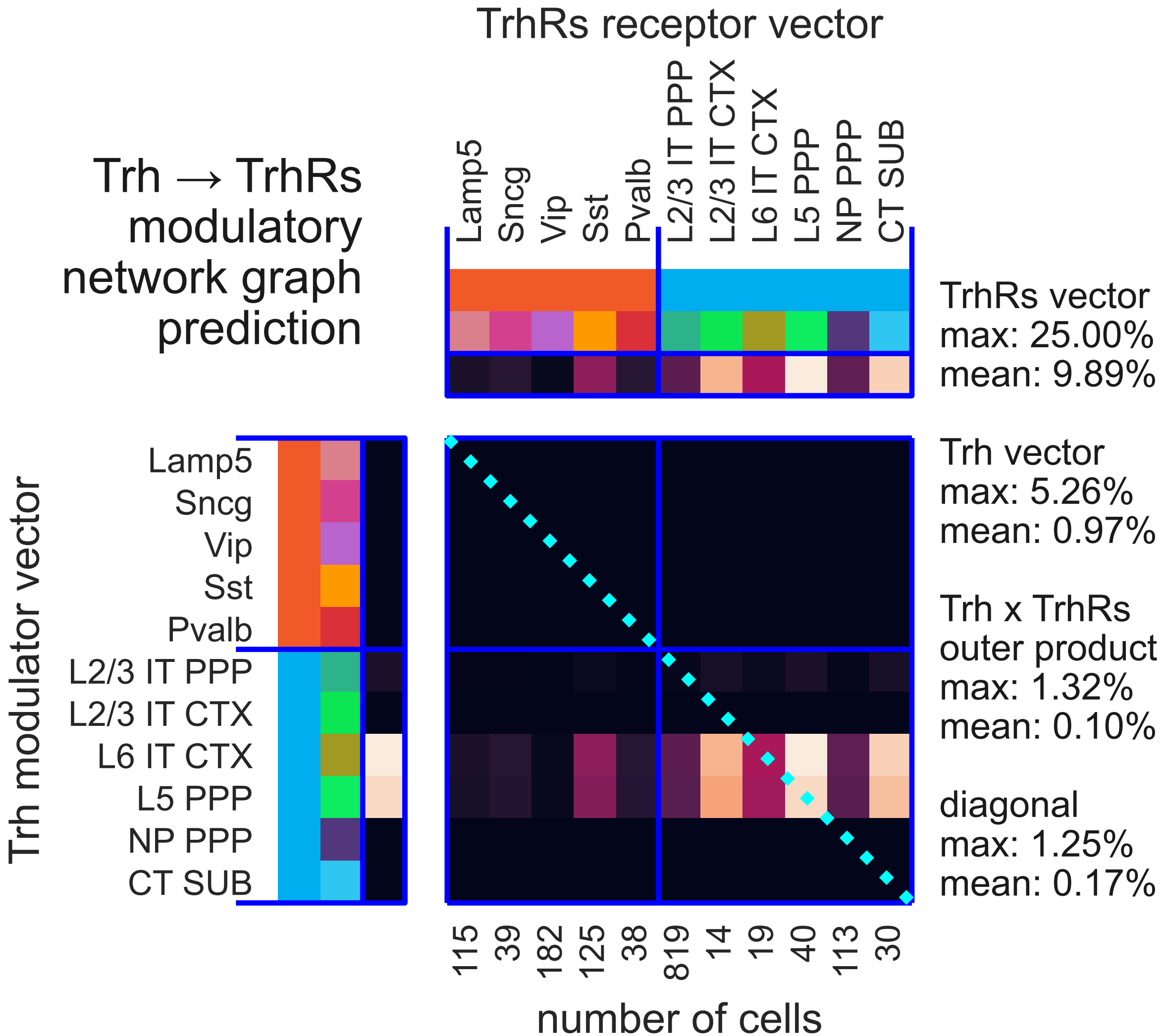

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)
TrhRs receptor vector
Trh → TrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b/CT ENT
L6b CTX
Trh modulator vector
100
34
97
91
84
98
159
20
88
116
230
12
66
305
14
49
number of cells
TrhRs vector
max: 91%
mean: 16%
Trh vector
max: 58%
mean: 5%
Trh x TrhRs
outer product
max: 52%
mean: 1%
diagonal
max: 52%
mean: 4%

Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

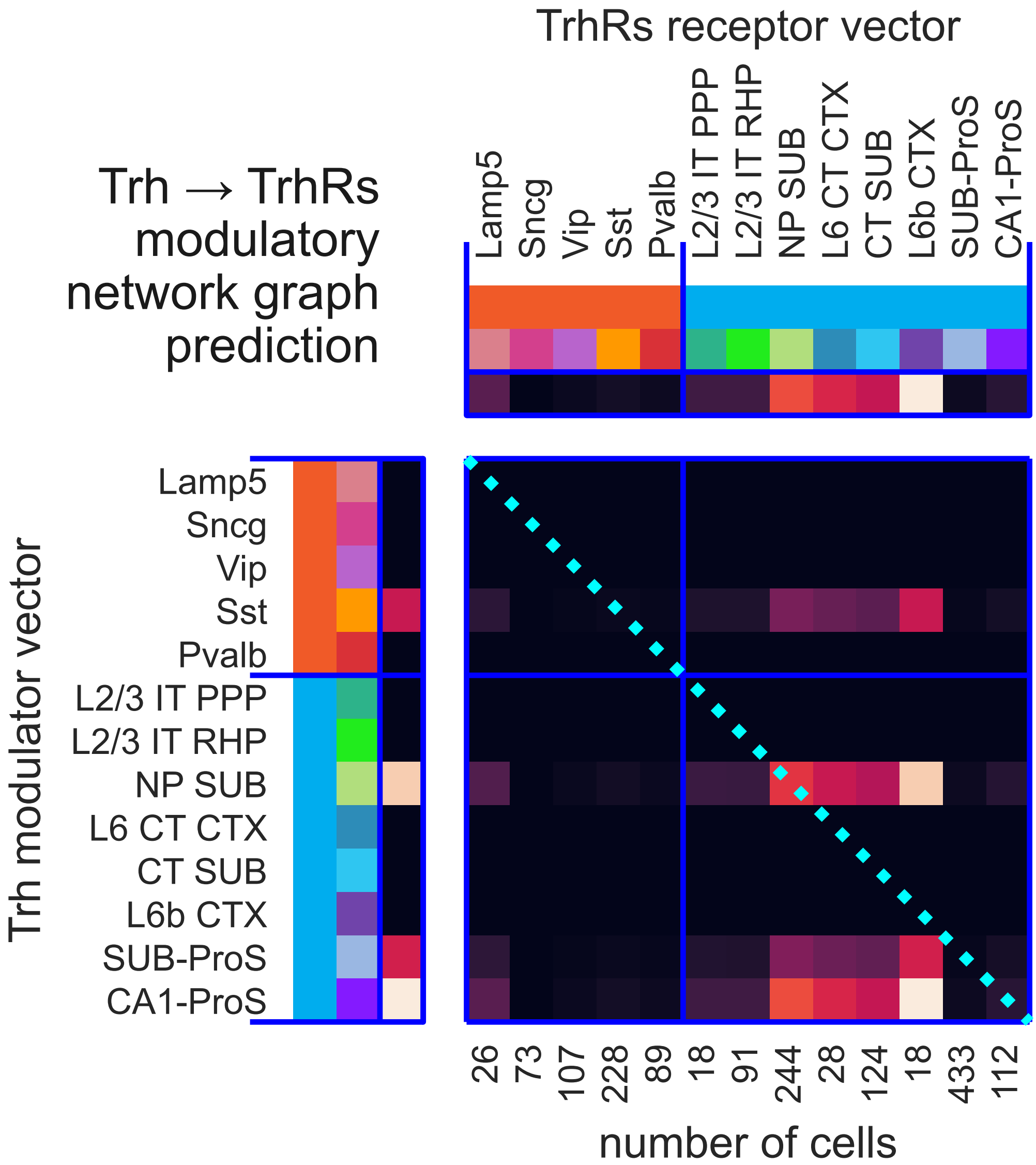



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
TrhRs receptor vector
Trh → TrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Trh modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
TrhRs vector
max: 51.30%
mean: 10.14%
Trh vector
max: 11.76%
mean: 0.71%
Trh x TrhRs
outer product
max: 6.04%
mean: 0.07%
diagonal
max: 3.46%
mean: 0.21%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



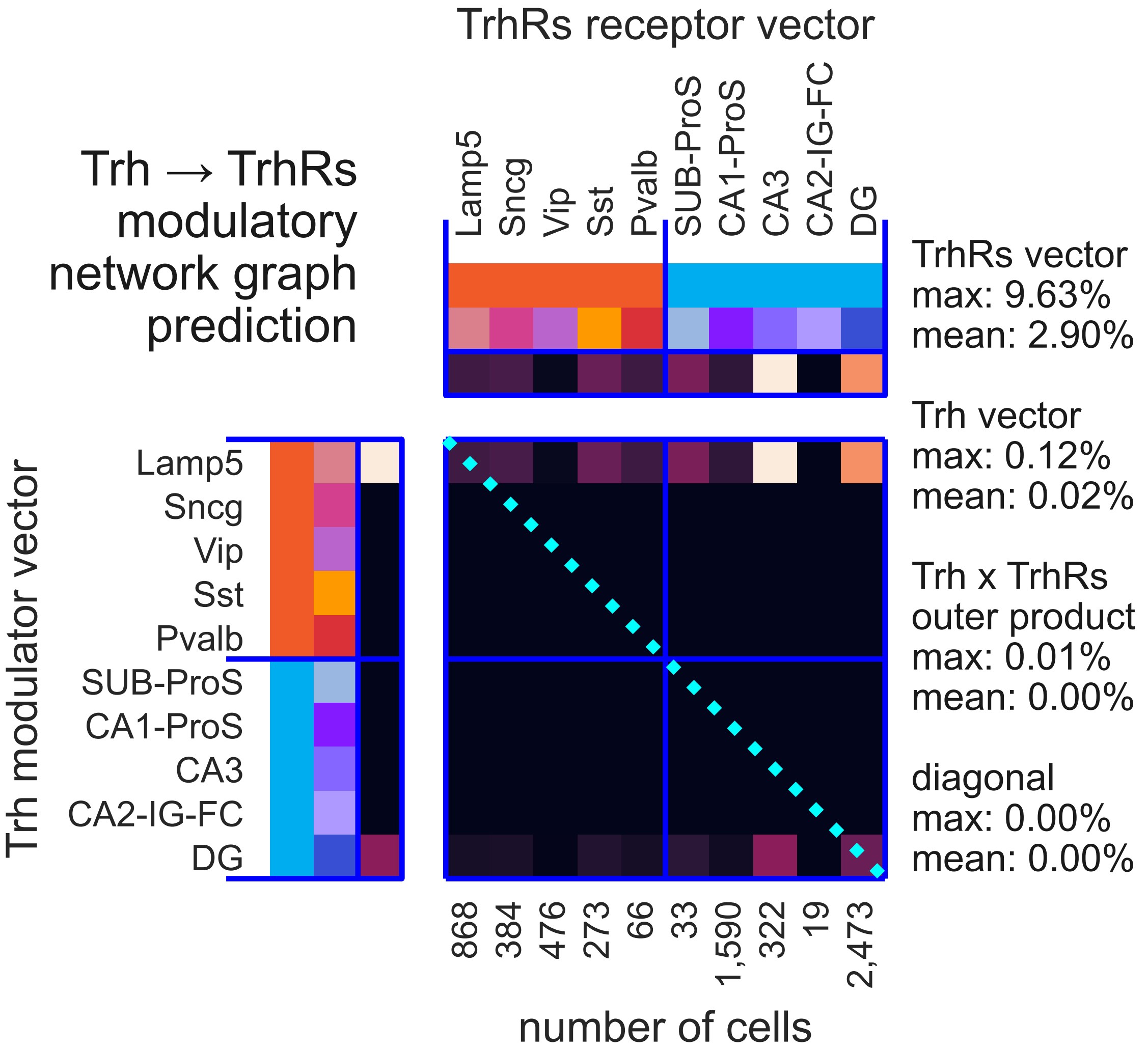
TrhRs vector
max: 33.33%
mean: 8.88%

Trh vector
max: 0.89%
mean: 0.20%

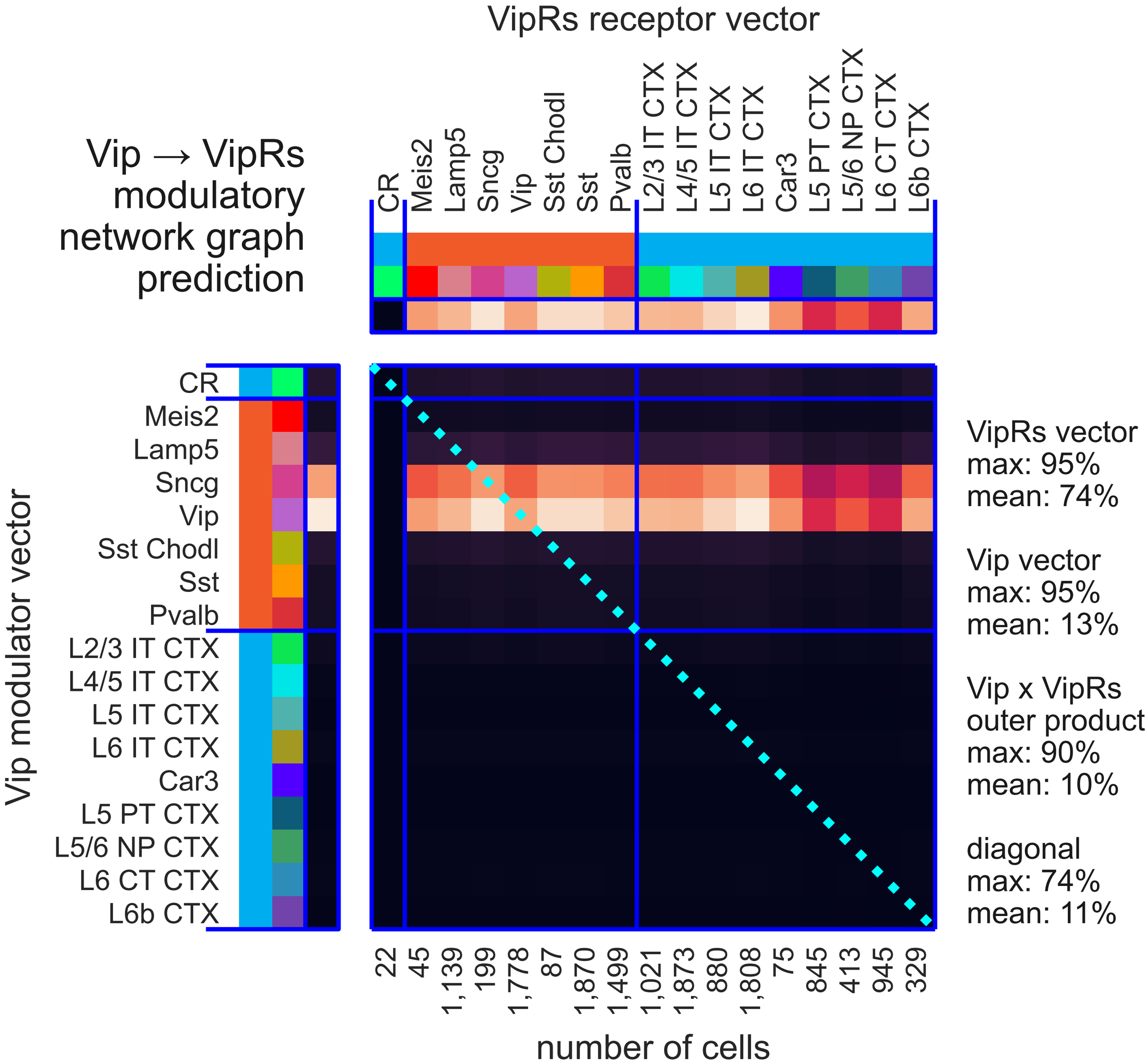
Trh x TrhRs
outer product
max: 0.30%
mean: 0.02%

diagonal
max: 0.17%
mean: 0.02%

Y21ss thr=10 sn:12402
Hippocampus (HIP)



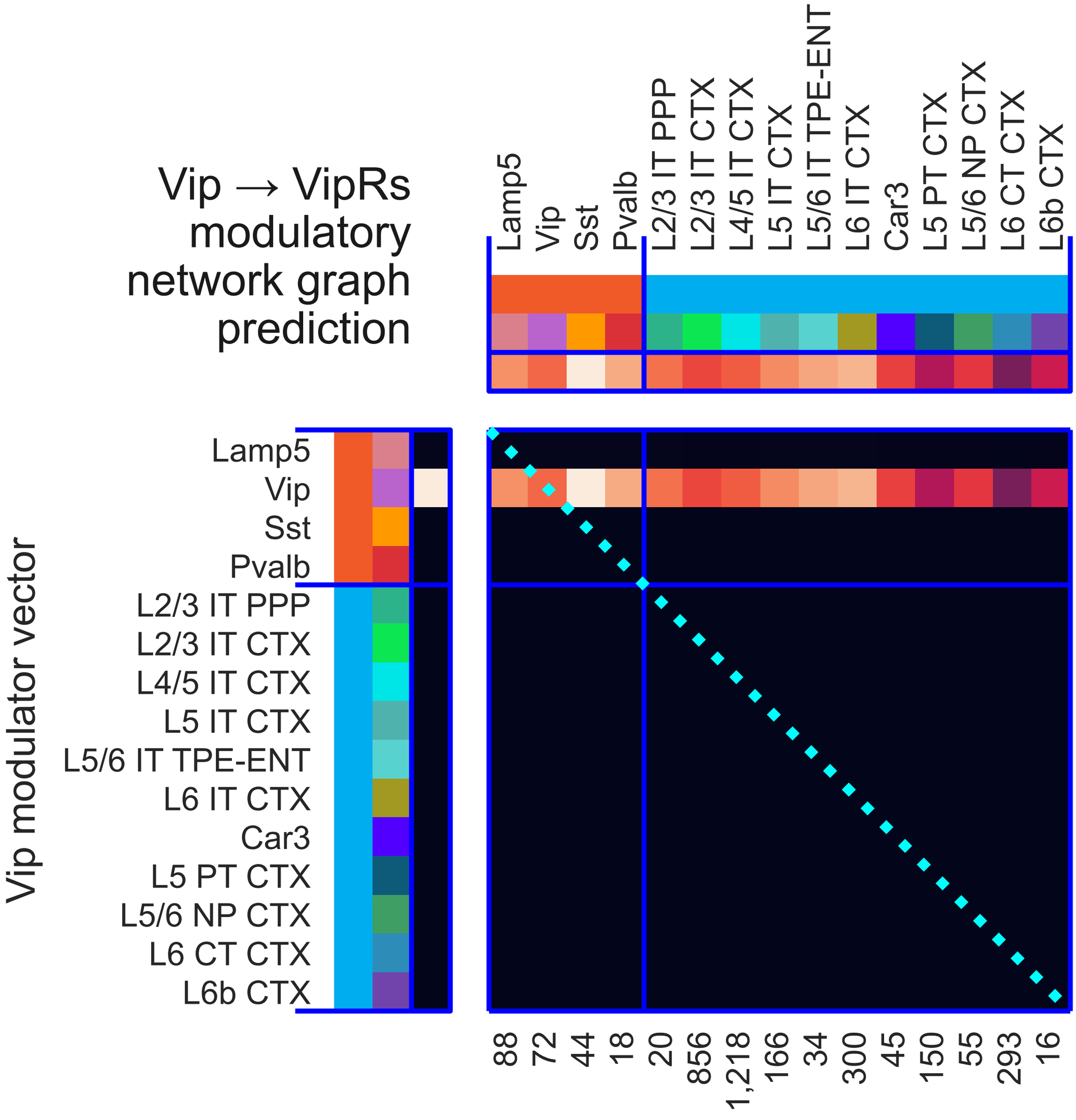
Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



Y21ss thr=10 sn:12402
Visual Cortex (VIS)

VipRs receptor vector

Vip → VipRs
modulatory
network graph
prediction



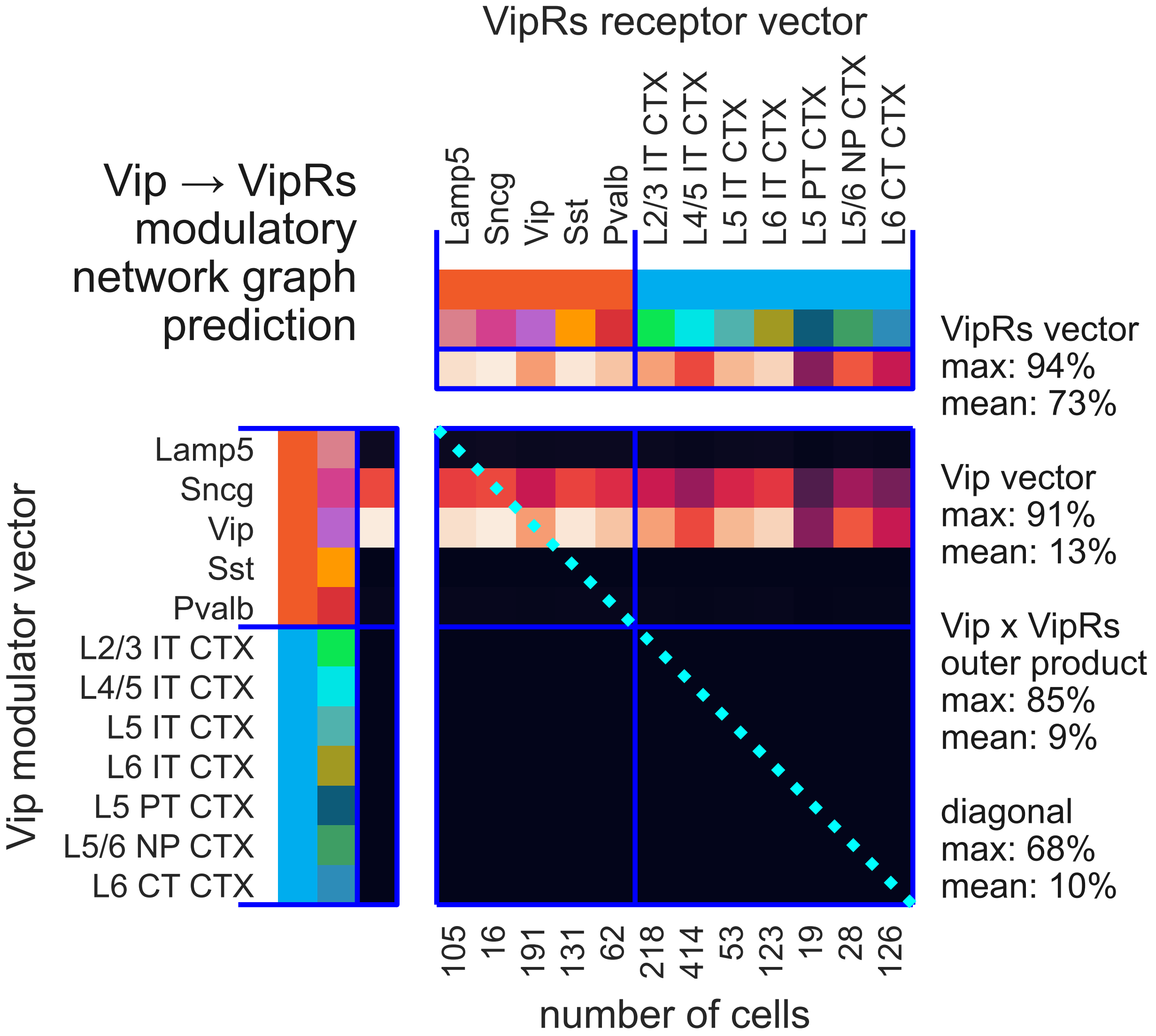
VipRs vector
max: 100%
mean: 68%

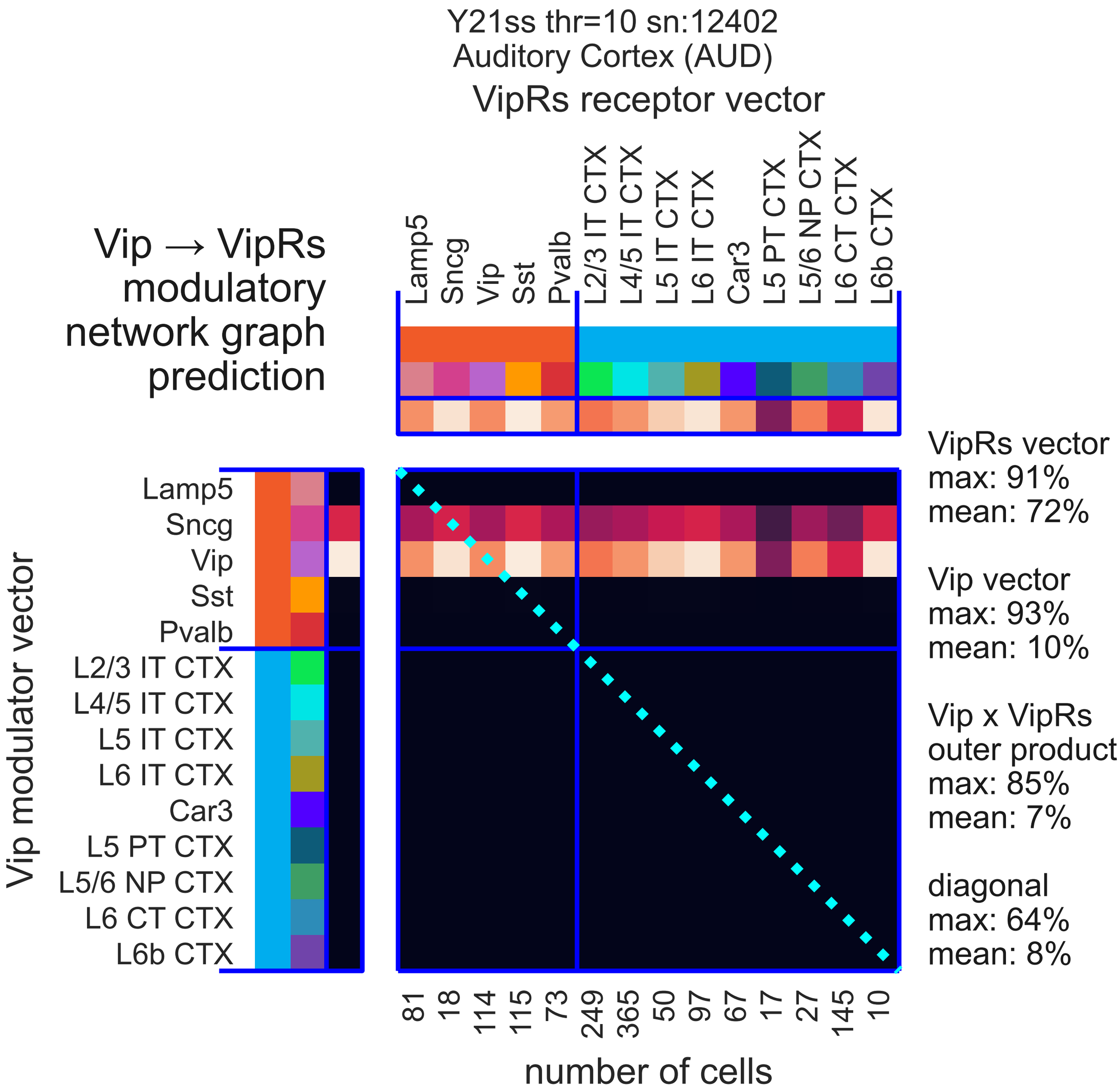
Vip vector
max: 99%
mean: 7%

Vip x VipRs
outer product
max: 99%
mean: 4%

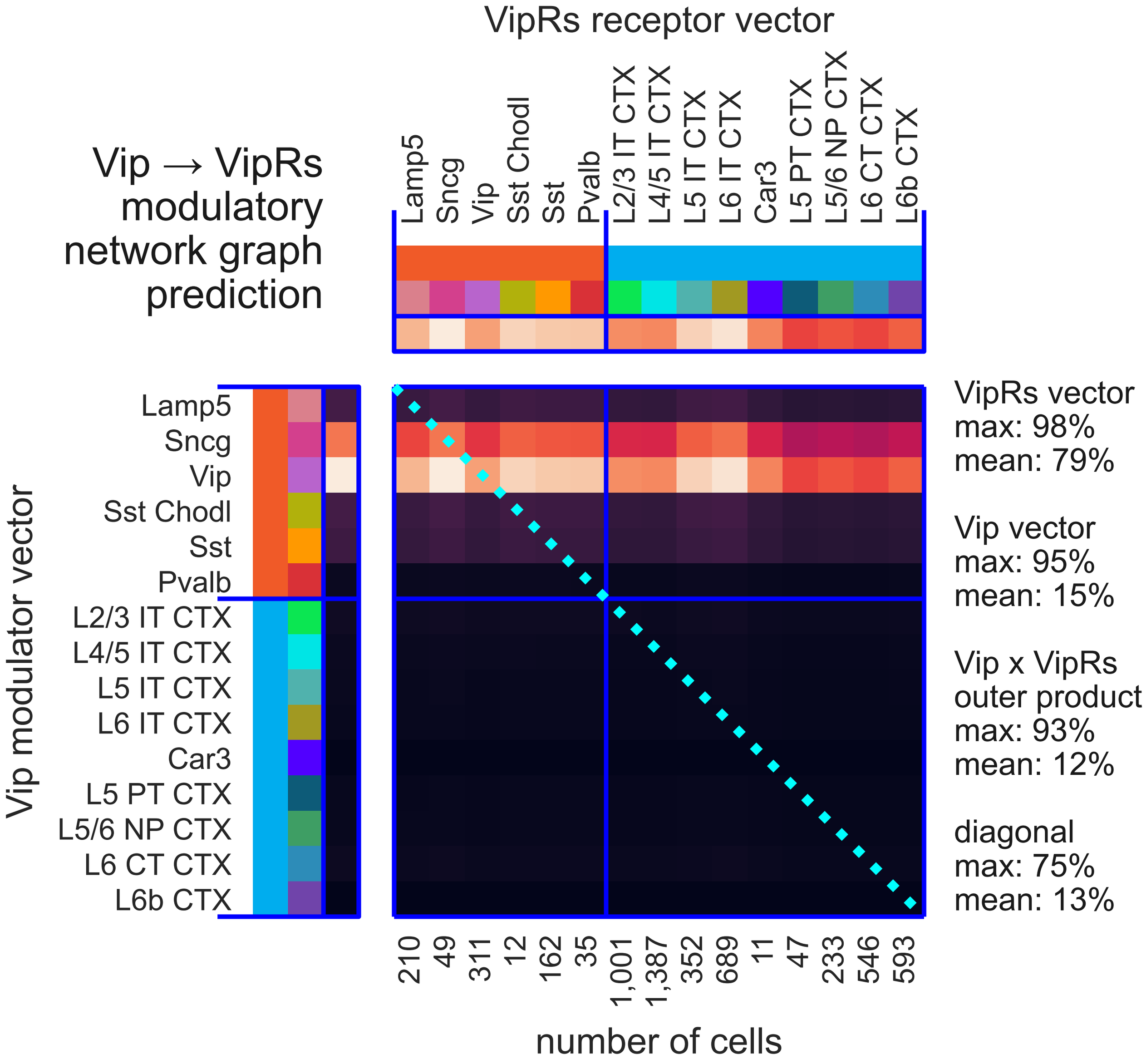
diagonal
max: 67%
mean: 5%

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)

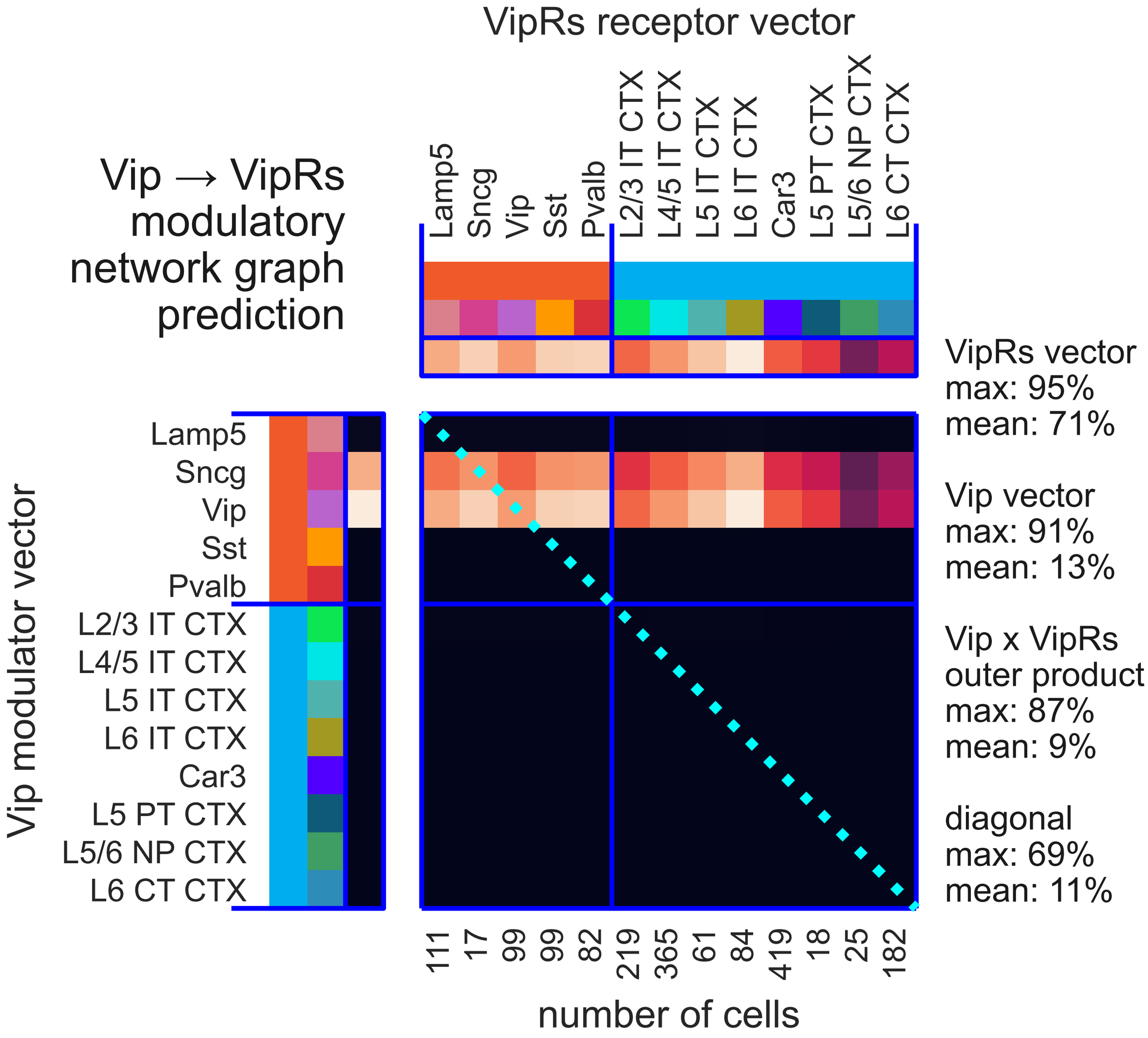



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)
VipRs receptor vector
Vip → VipRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Vip modulator vector
81
18
114
115
73
249
365
50
97
67
17
27
145
10
number of cells
VipRs vector
max: 91%
mean: 72%
Vip vector
max: 93%
mean: 10%
Vip x VipRs
outer product
max: 85%
mean: 7%
diagonal
max: 64%
mean: 8%

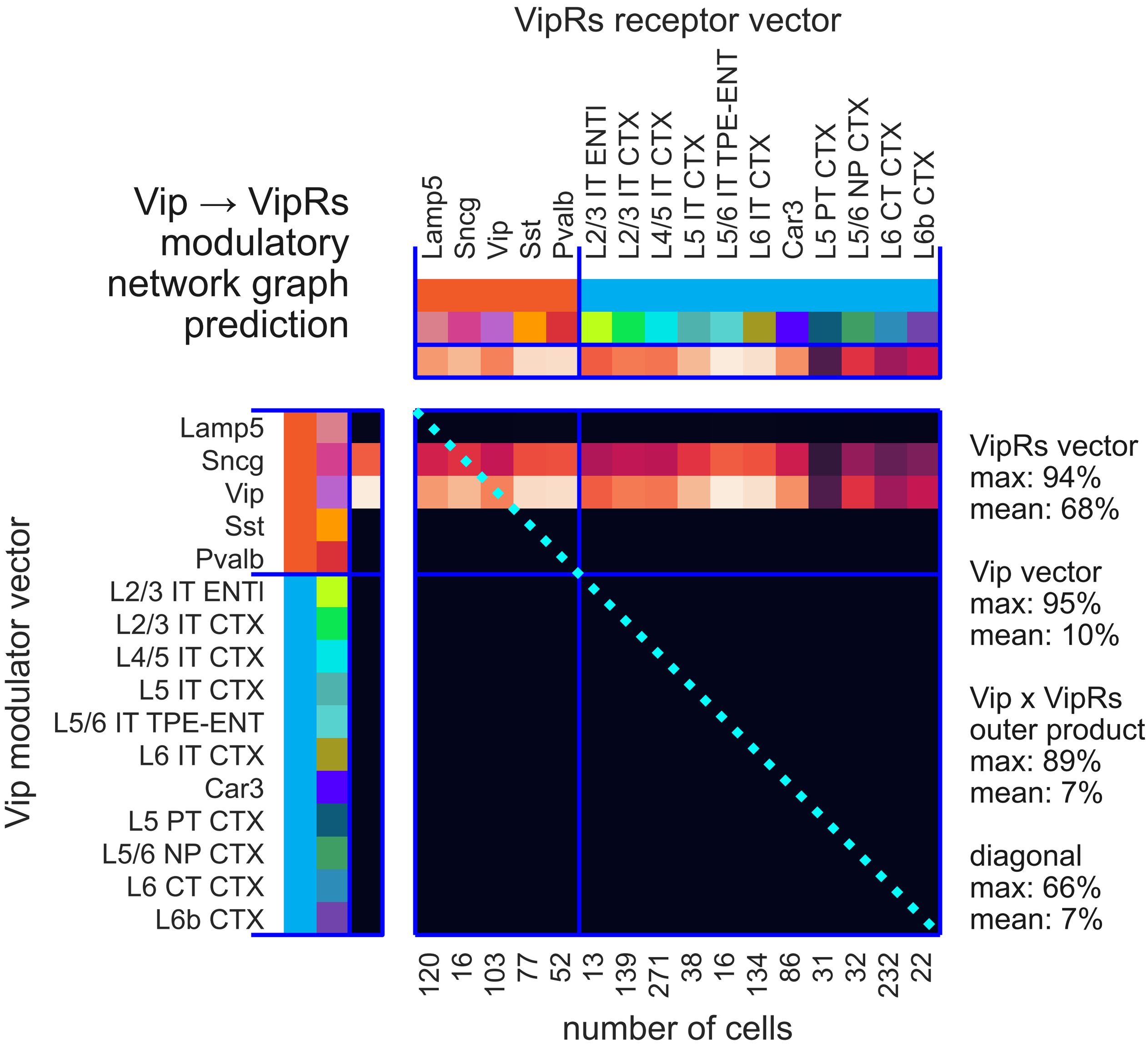
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

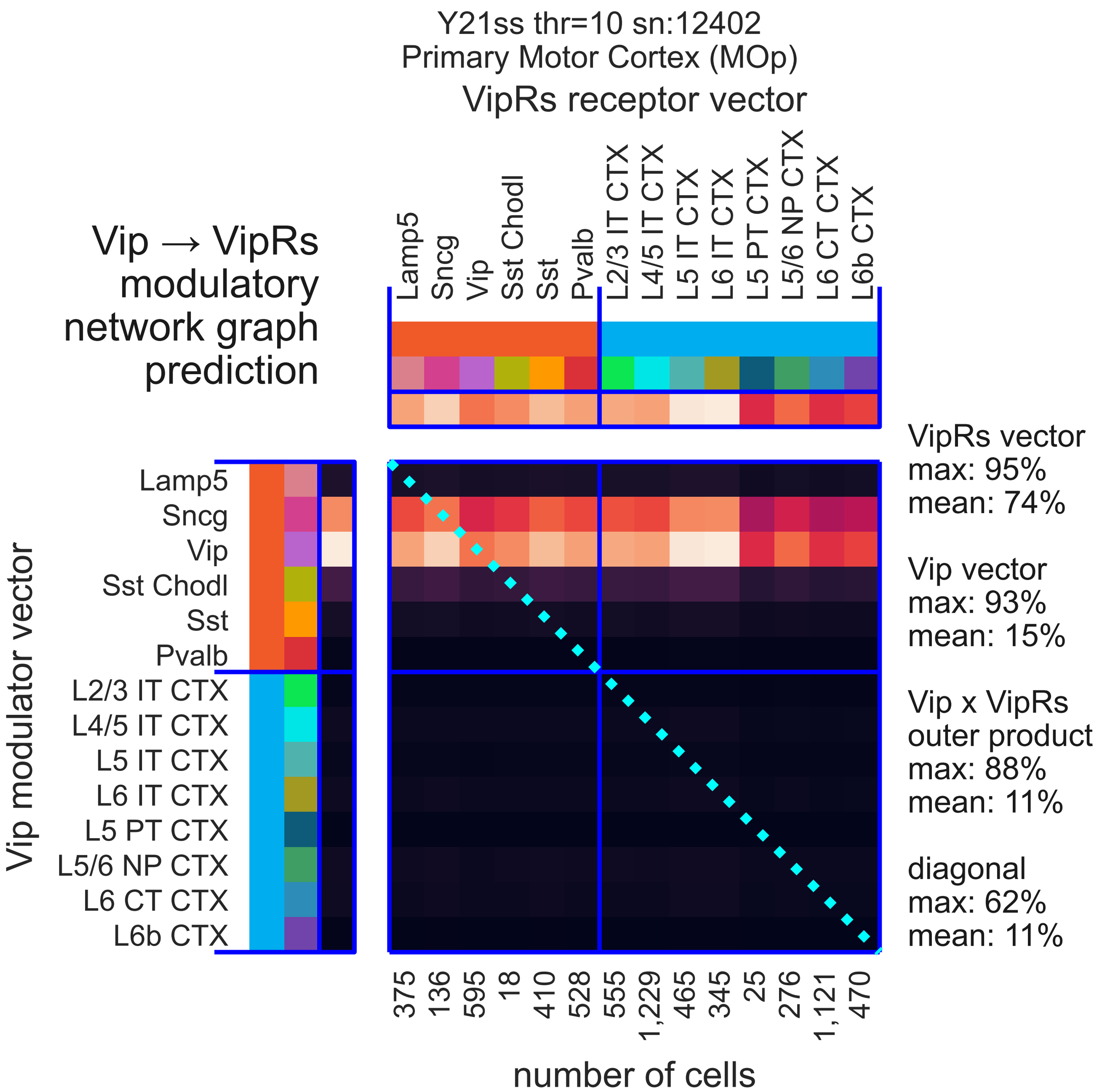


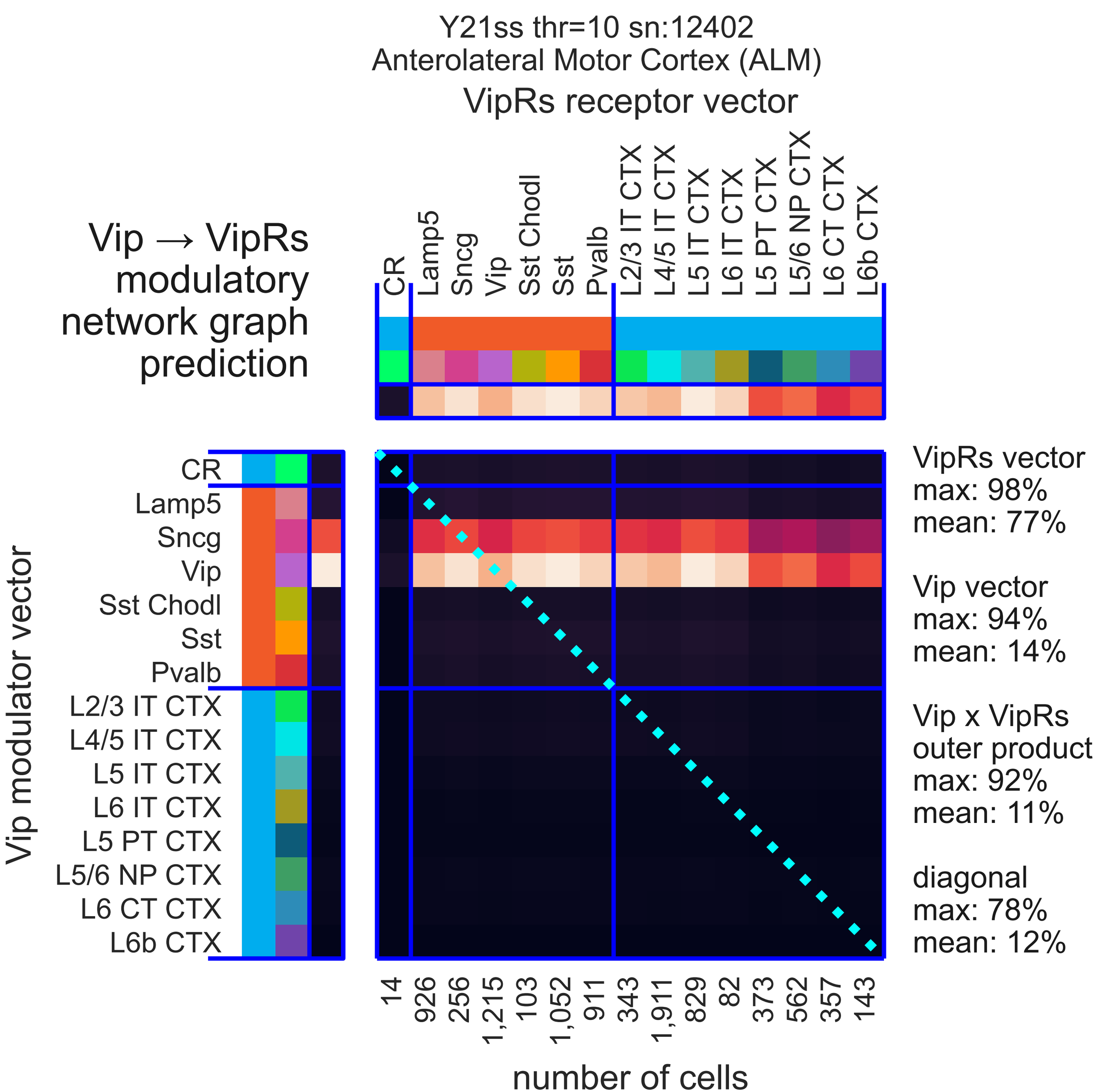
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



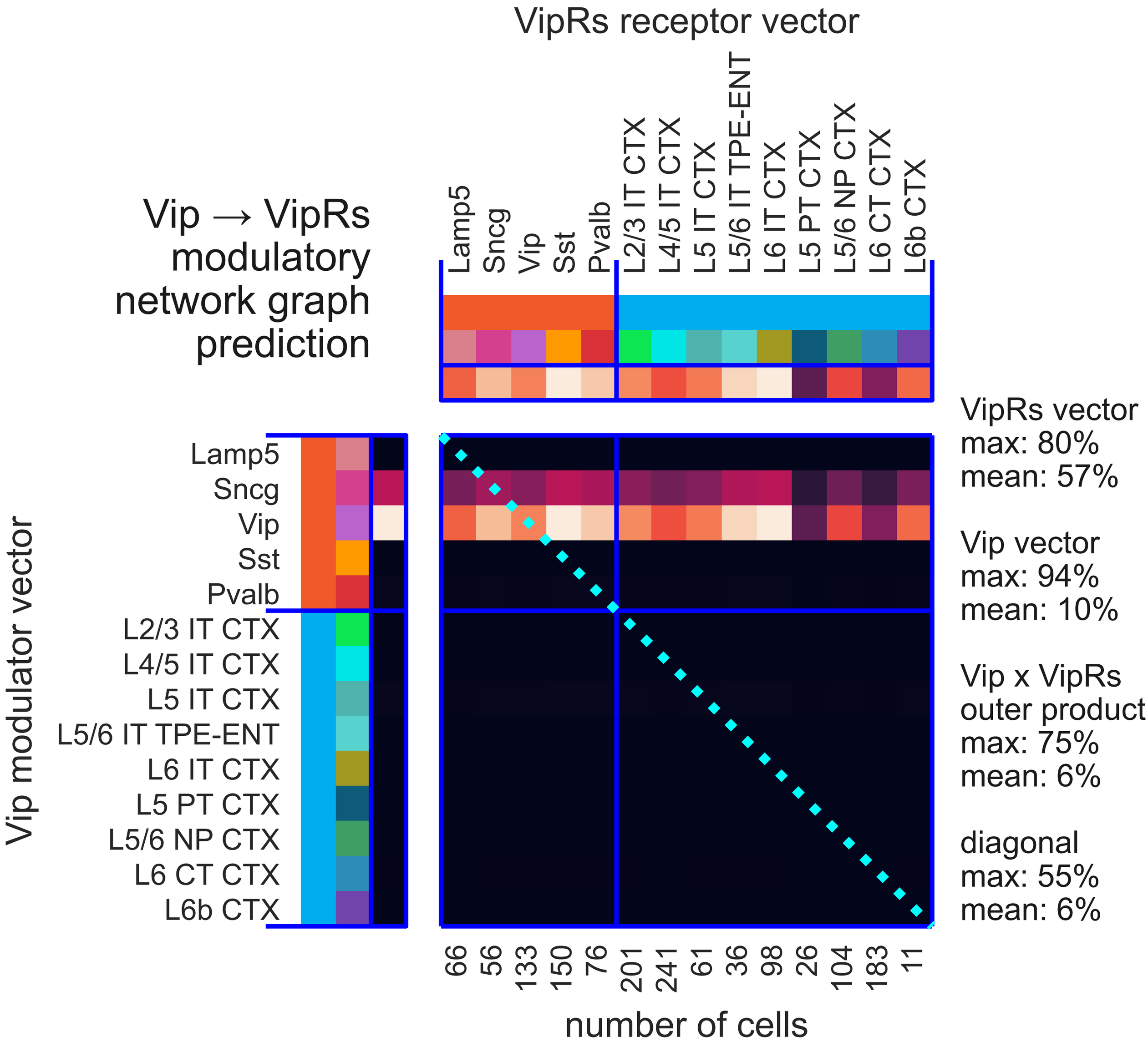
Y21ss thr=10 sn:12402
Gustatory Cortex (GU)




Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
VipRs receptor vector
Vip → VipRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Vip modulator vector
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells
VipRs vector
max: 95%
mean: 74%
Vip vector
max: 93%
mean: 15%
Vip x VipRs
outer product
max: 88%
mean: 11%
diagonal
max: 62%
mean: 11%


Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)
VipRs receptor vector
Vip → VipRs
modulatory
network graph
prediction
CR
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Vip modulator vector
14
926
256
1,215
103
1,052
911
343
1,911
829
82
373
562
357
143
number of cells
VipRs vector
max: 98%
mean: 77%
Vip vector
max: 94%
mean: 14%
Vip x VipRs
outer product
max: 92%
mean: 11%
diagonal
max: 78%
mean: 12%

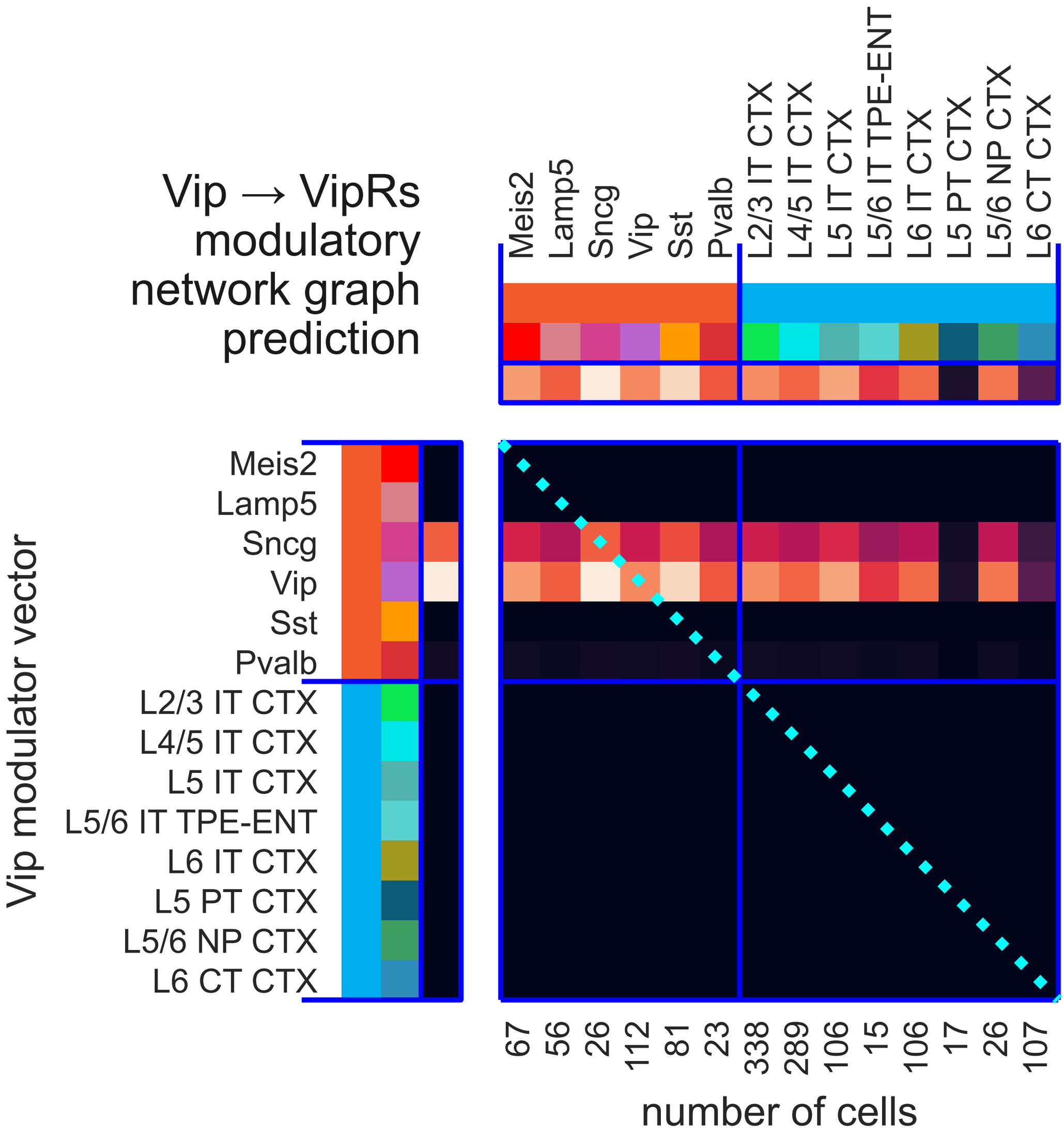
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)



Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

VipRs receptor vector

Vip → VipRs modulatory network graph prediction



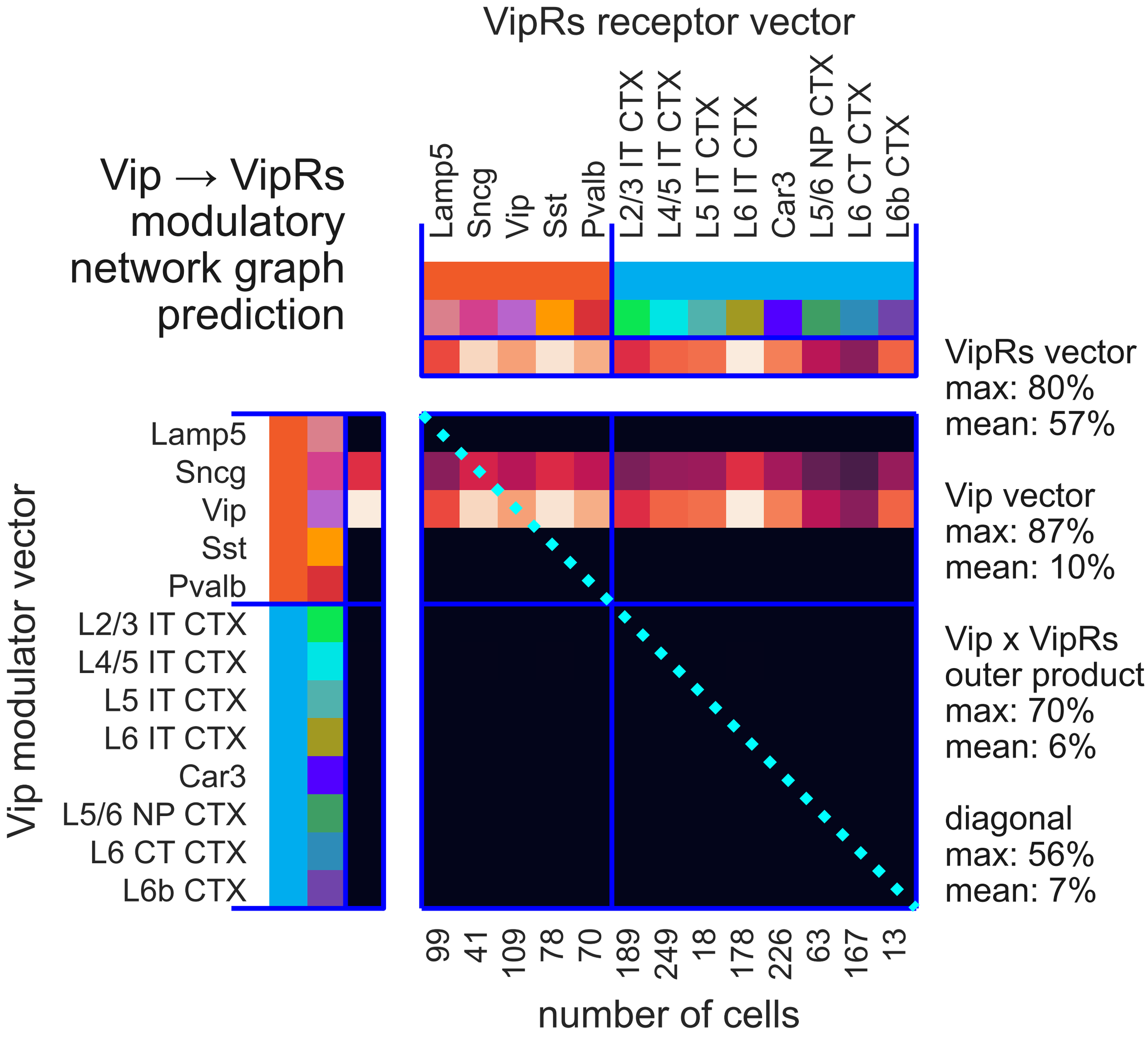
VipRs vector
max: 81%
mean: 54%

Vip vector
max: 93%
mean: 11%

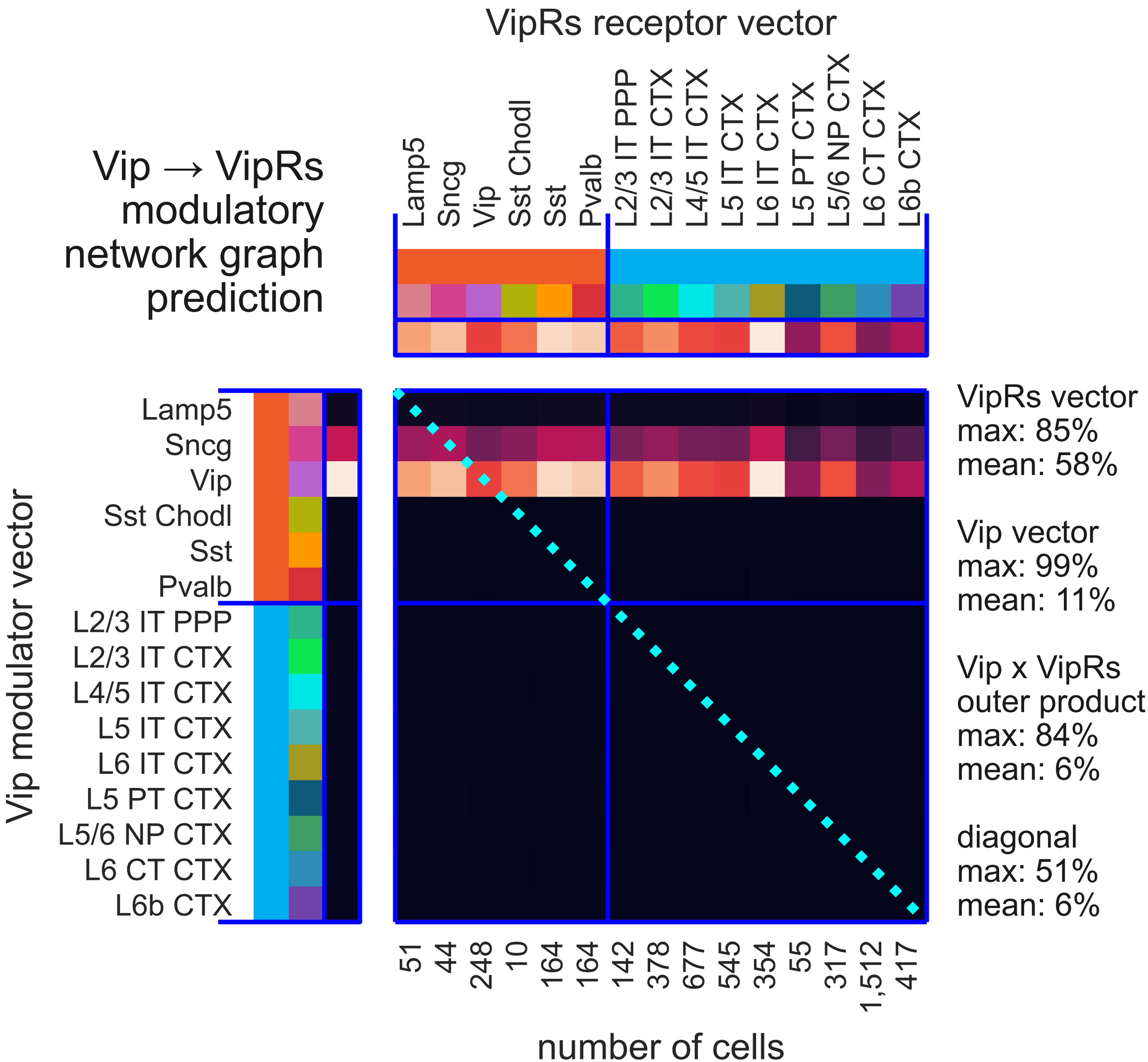
Vip x VipRs
outer product
max: 75%
mean: 6%

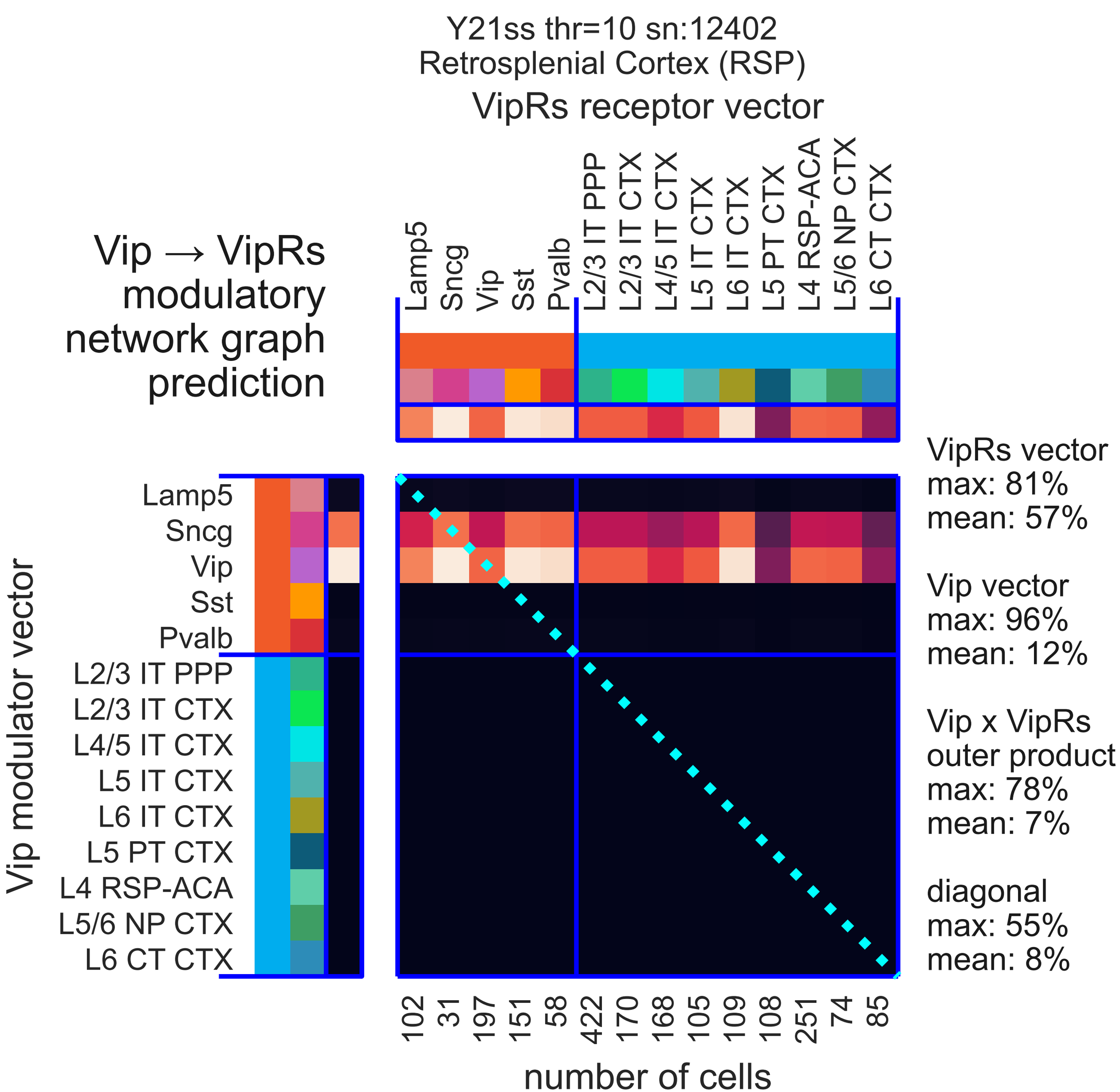
diagonal
max: 56%
mean: 8%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

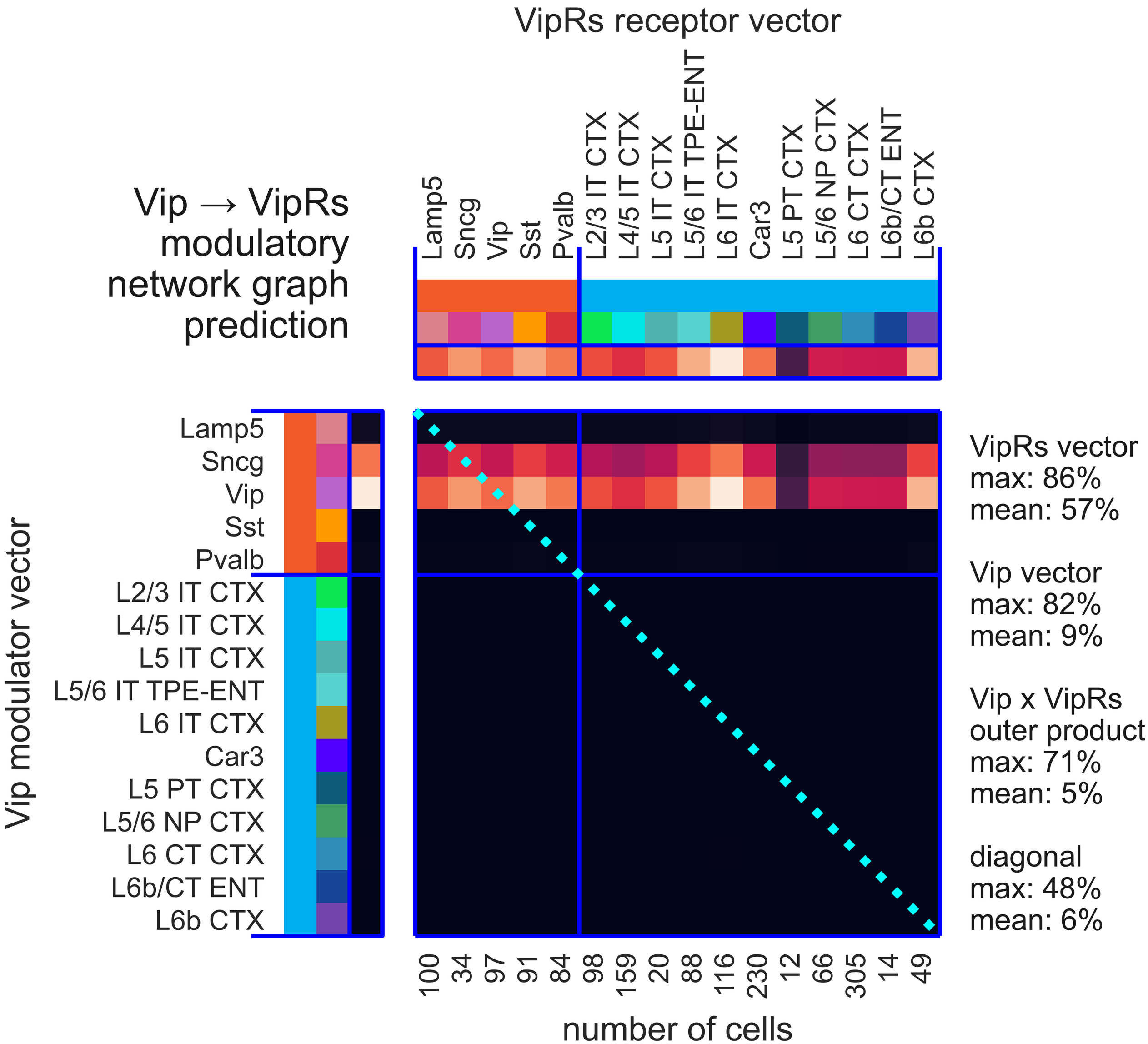


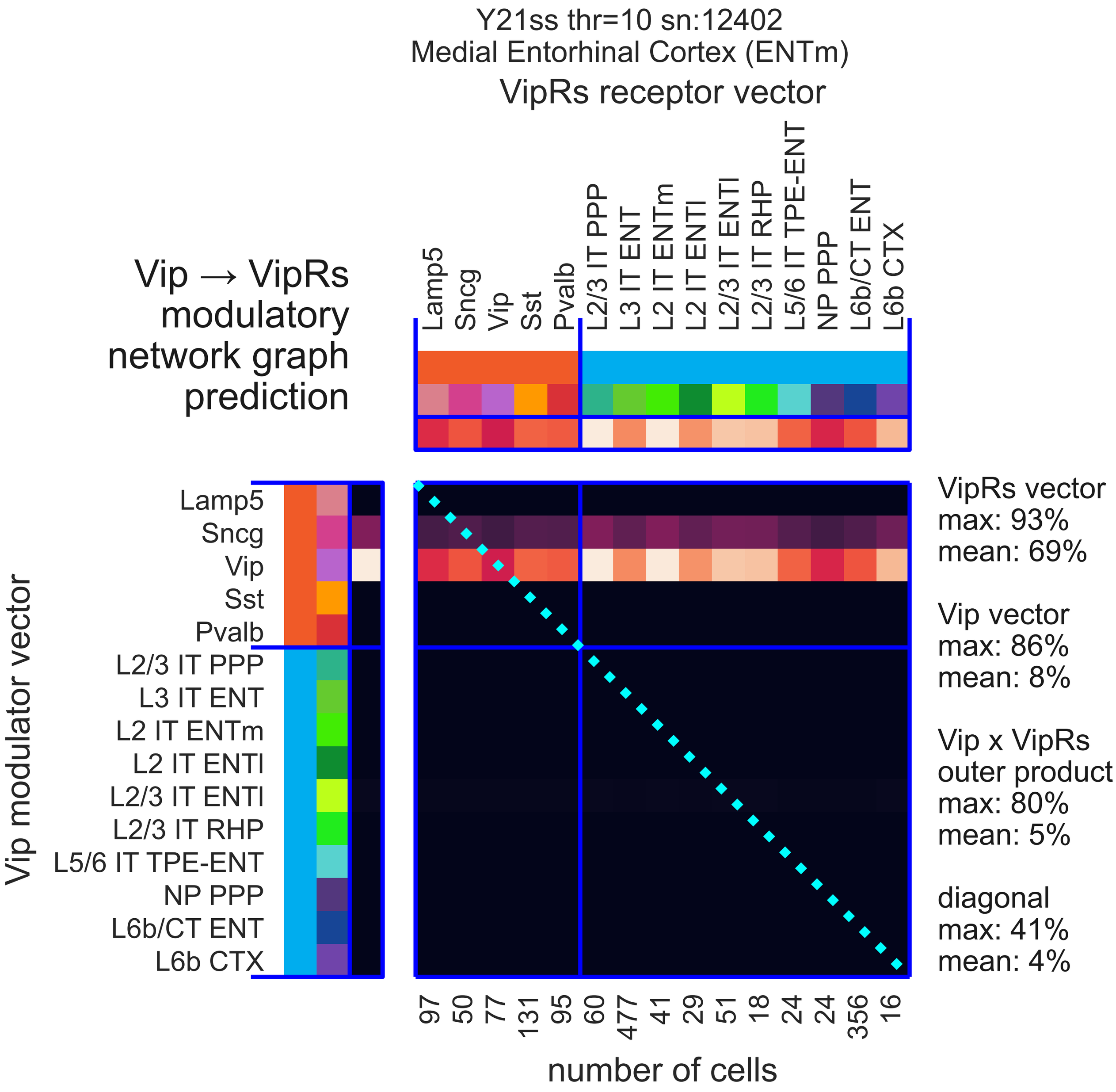
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)



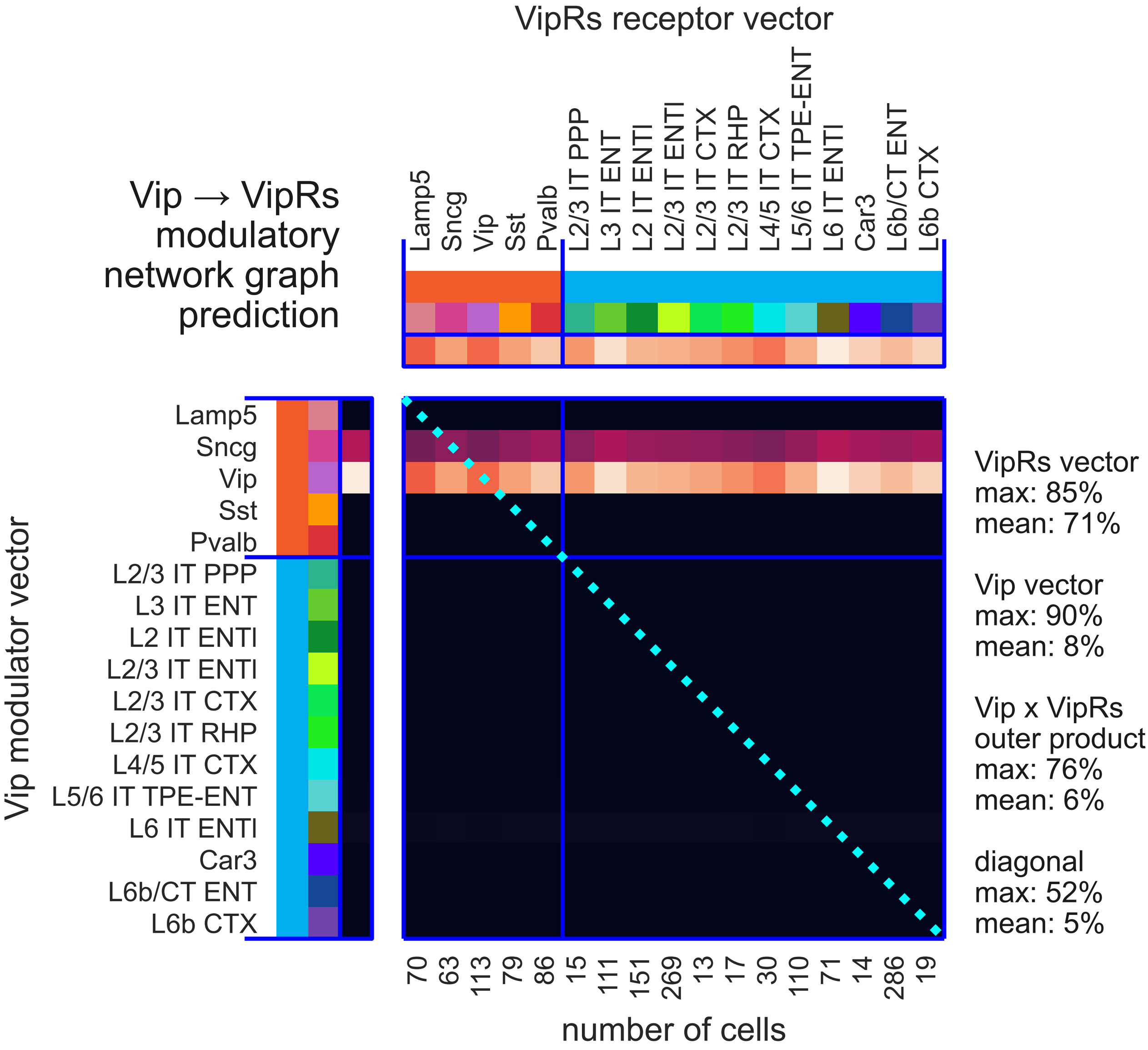

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
VipRs receptor vector
Vip → VipRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Vip modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
VipRs vector
max: 81%
mean: 57%
Vip vector
max: 96%
mean: 12%
Vip x VipRs
outer product
max: 78%
mean: 7%
diagonal
max: 55%
mean: 8%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

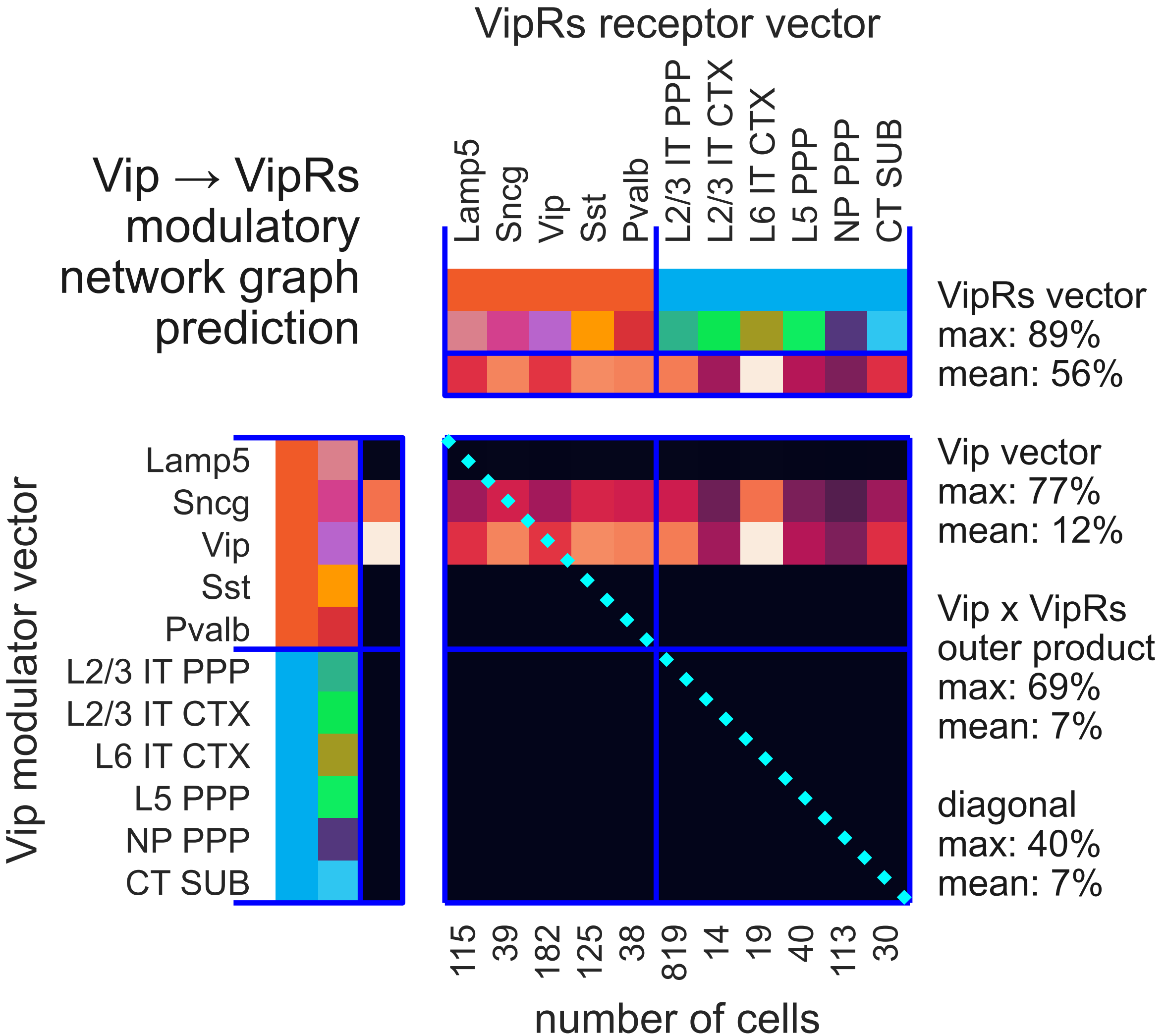



Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
VipRs receptor vector
Vip → VipRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Vip modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
VipRs vector
max: 93%
mean: 69%
Vip vector
max: 86%
mean: 8%
Vip x VipRs
outer product
max: 80%
mean: 5%
diagonal
max: 41%
mean: 4%

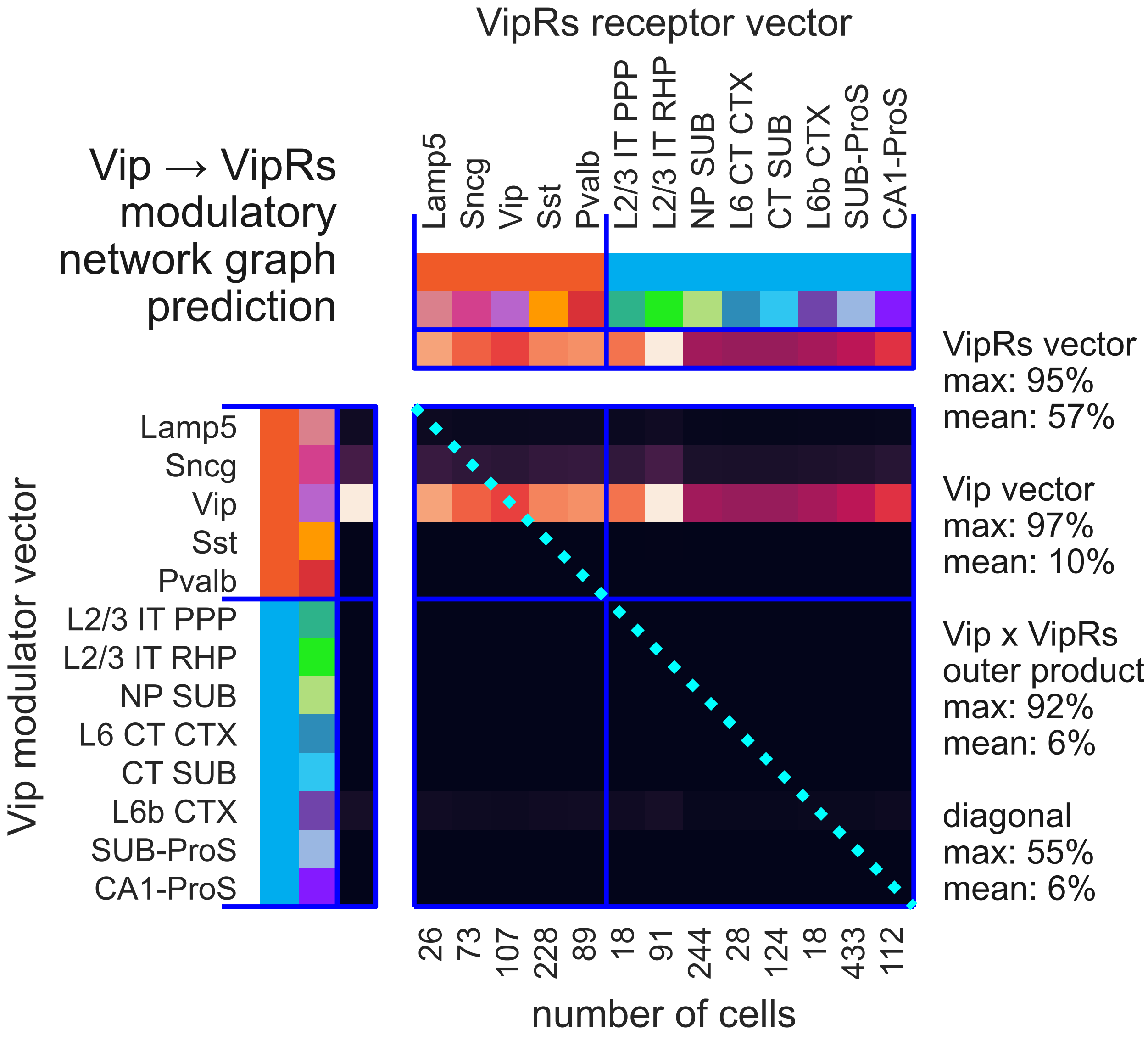
Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)



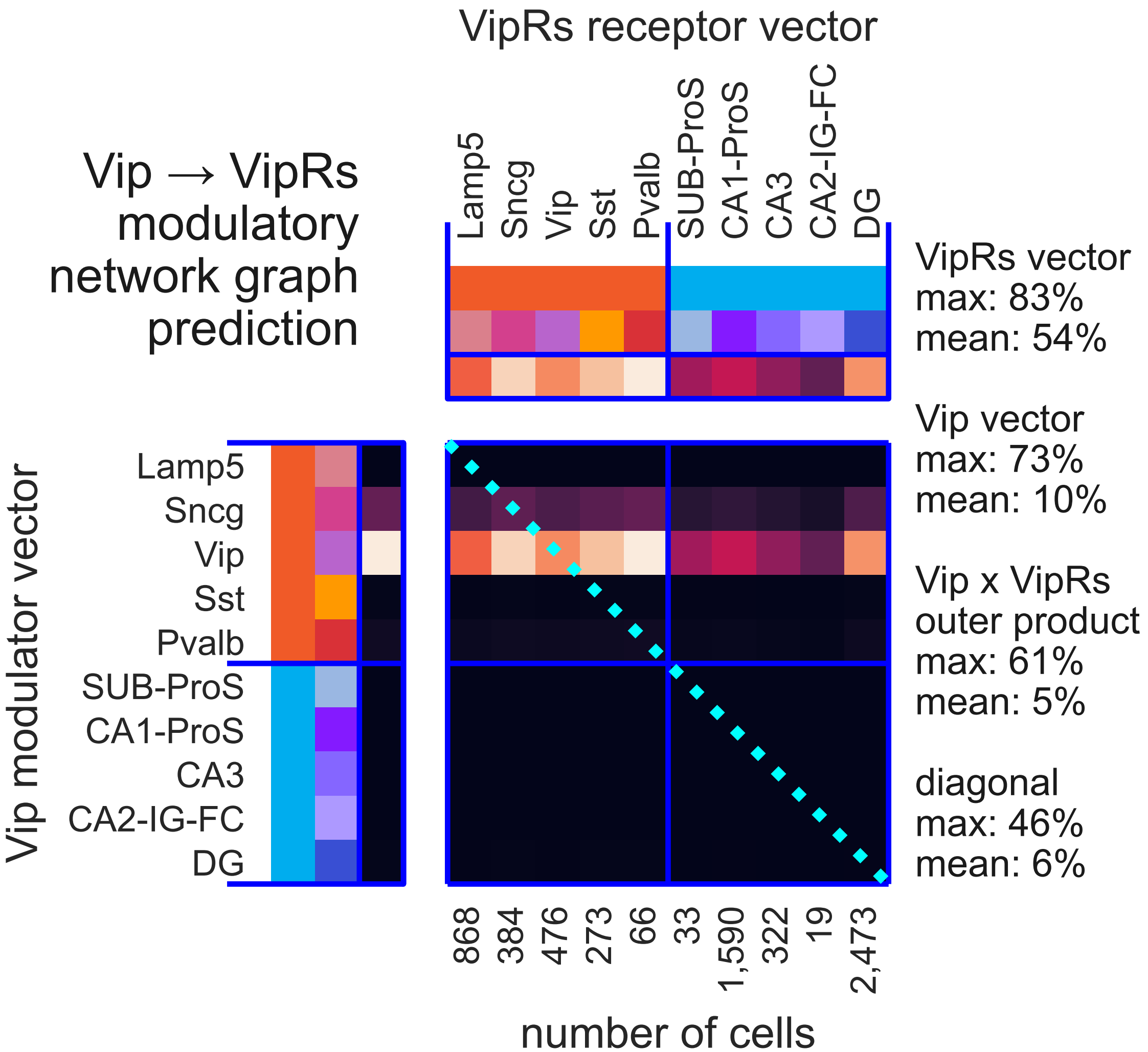
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



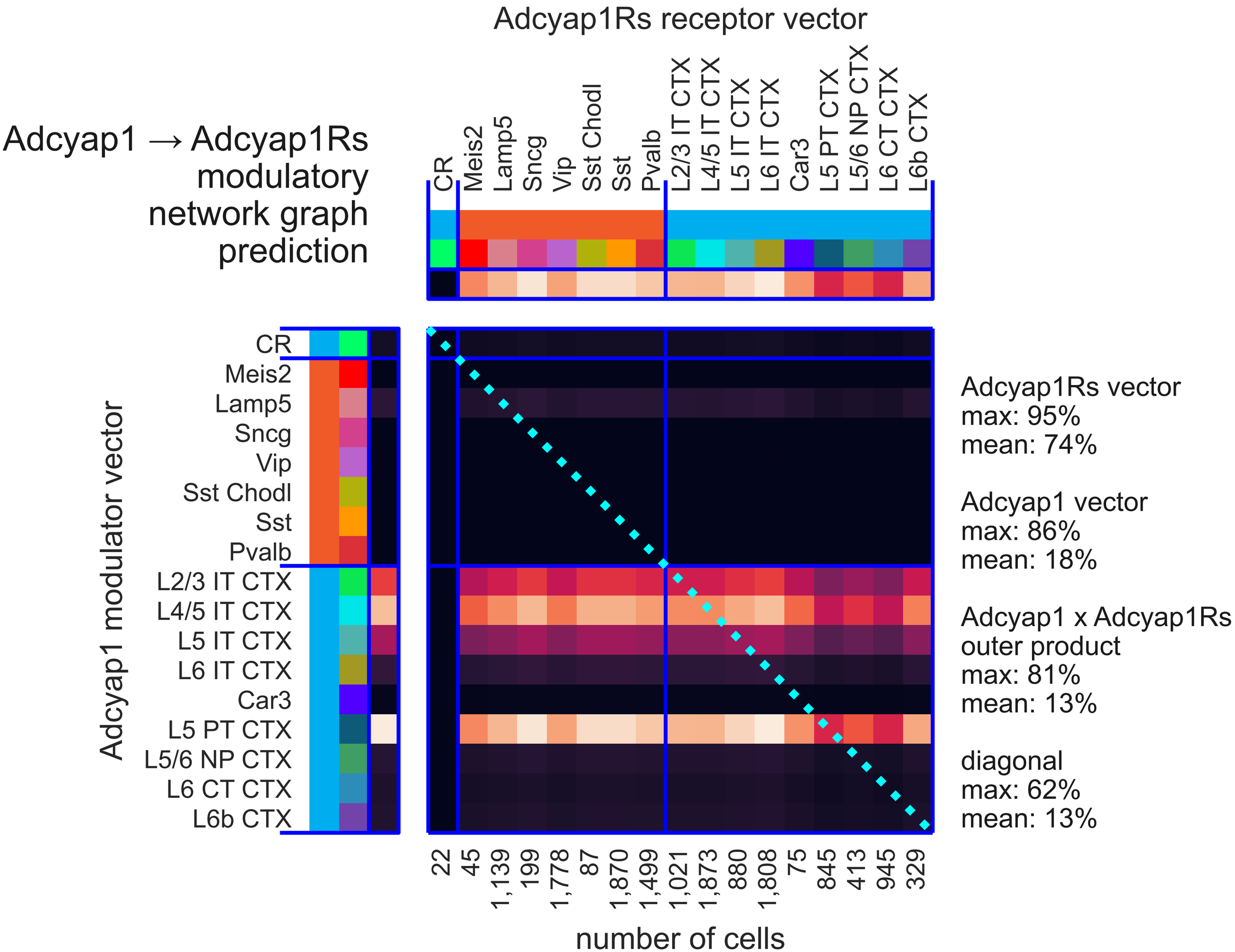
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)

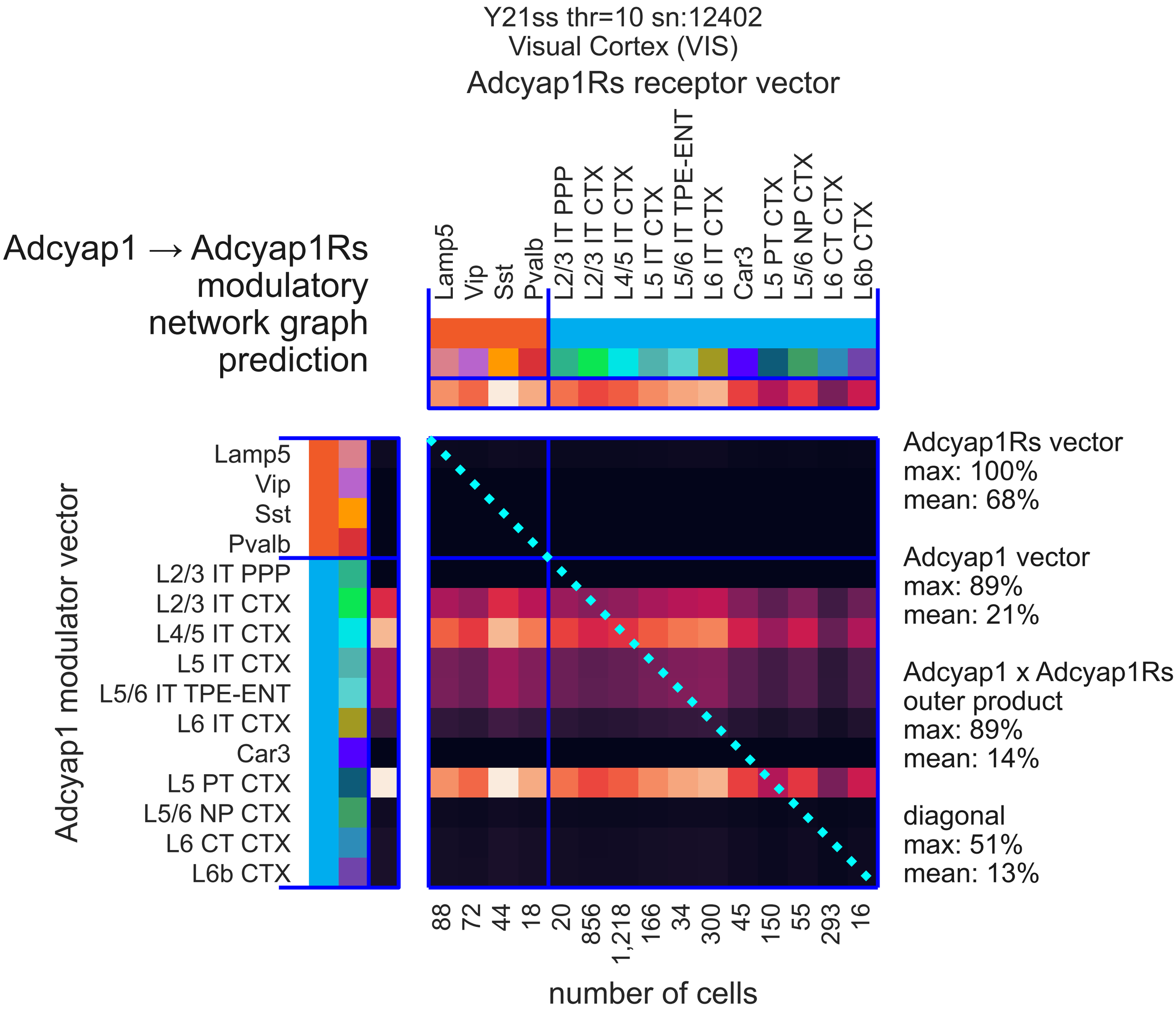


Y21ss thr=10 sn:12402
Hippocampus (HIP)

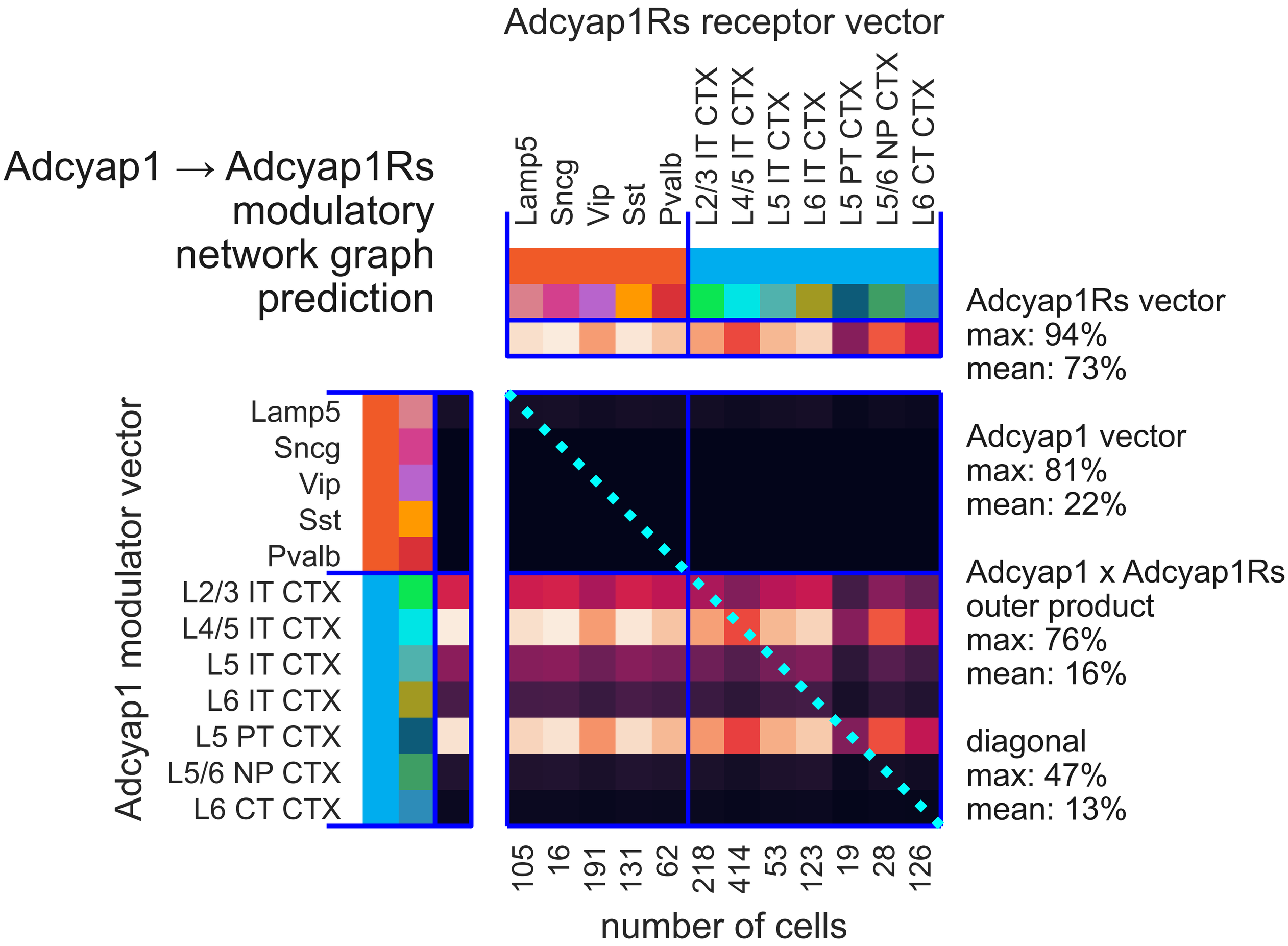


Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



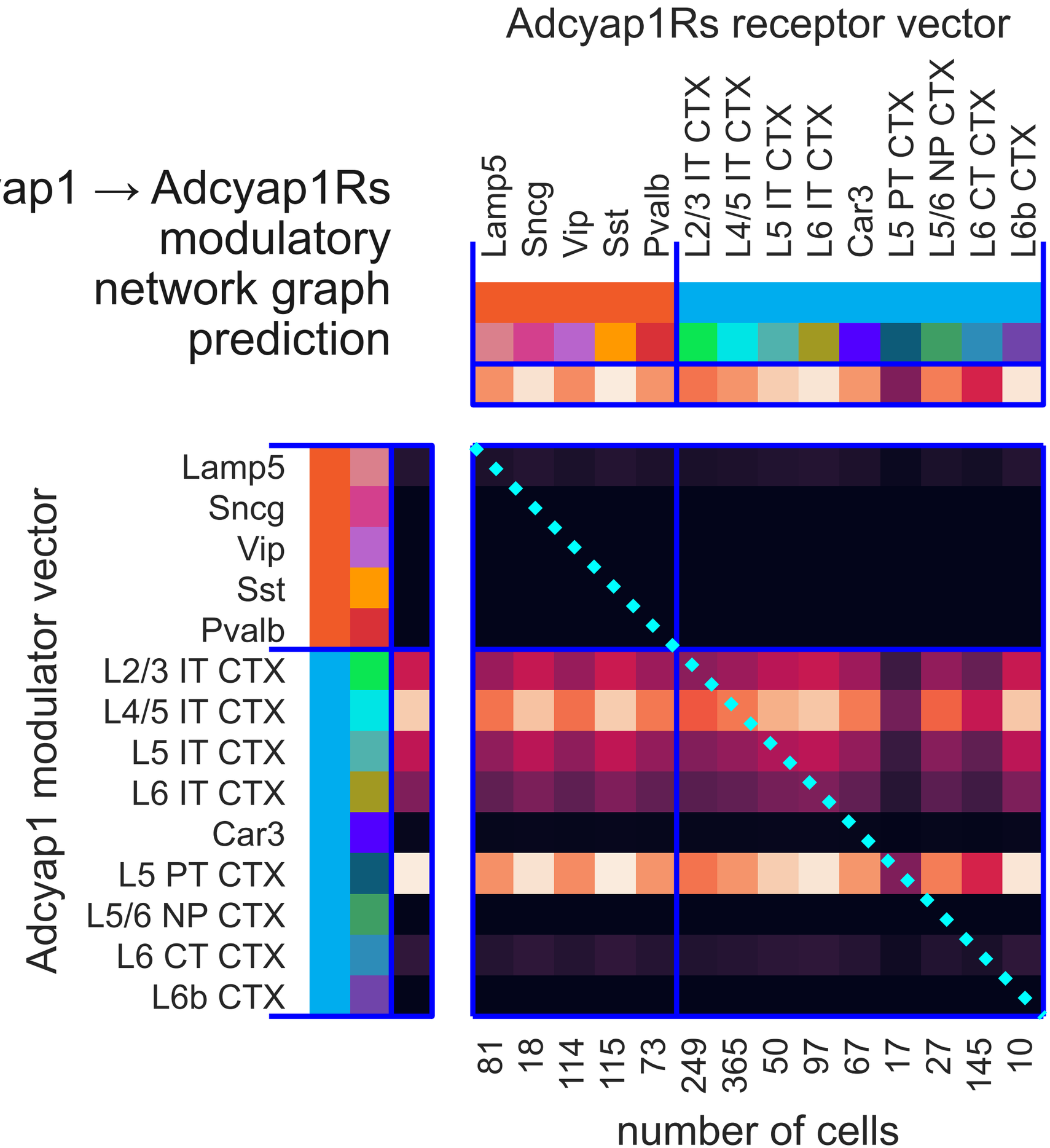

Y21ss thr=10 sn:12402
Visual Cortex (VIS)
Adcyap1Rs receptor vector
Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Adcyap1 modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
Adcyap1Rs vector
max: 100%
mean: 68%
Adcyap1 vector
max: 89%
mean: 21%
Adcyap1 x Adcyap1Rs
outer product
max: 89%
mean: 14%
diagonal
max: 51%
mean: 13%

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction



Adcyap1Rs vector
max: 91%
mean: 72%

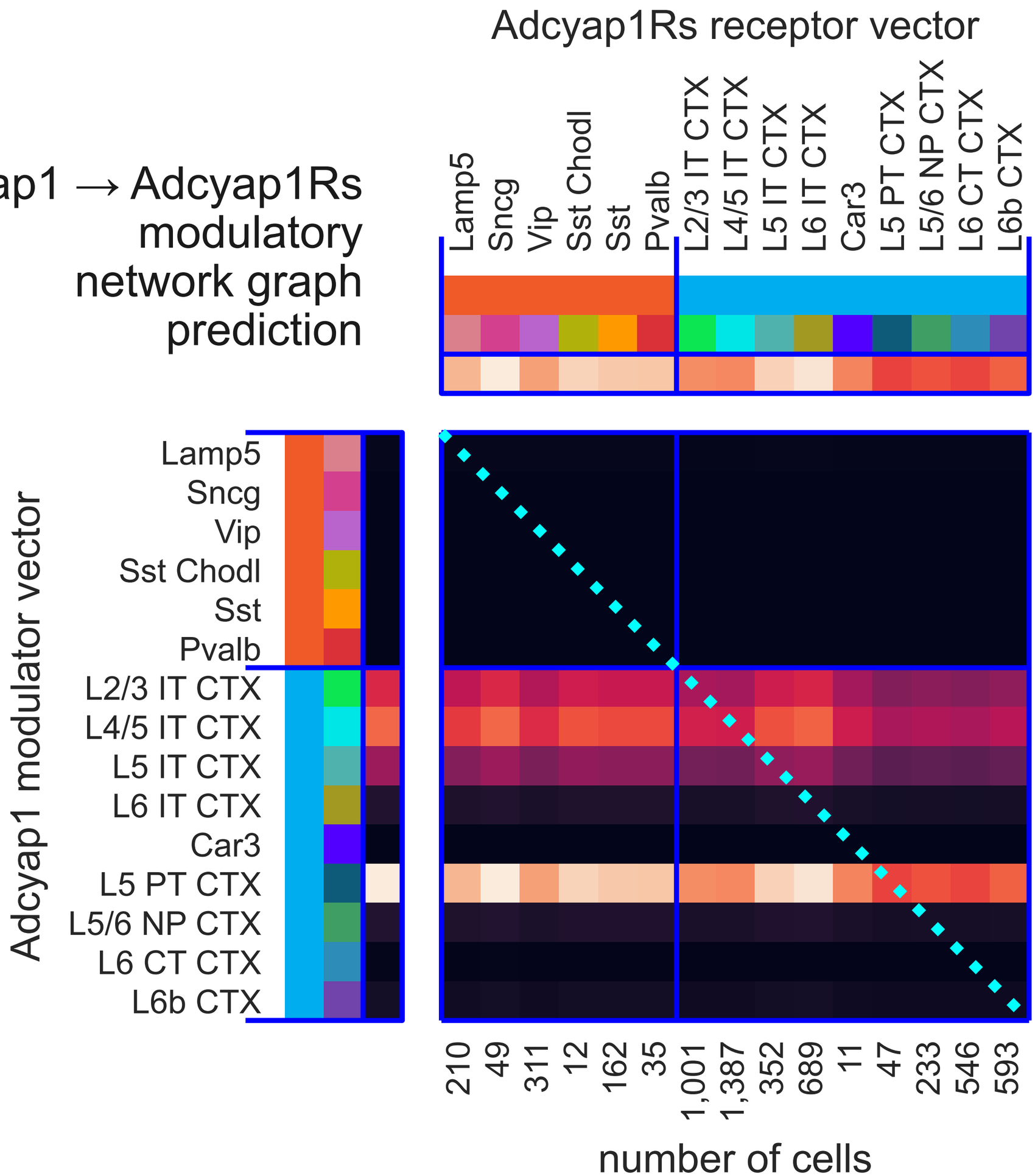
Adcyap1 vector
max: 76%
mean: 19%

Adcyap1 x Adcyap1Rs
outer product
max: 70%
mean: 14%

diagonal
max: 50%
mean: 11%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction



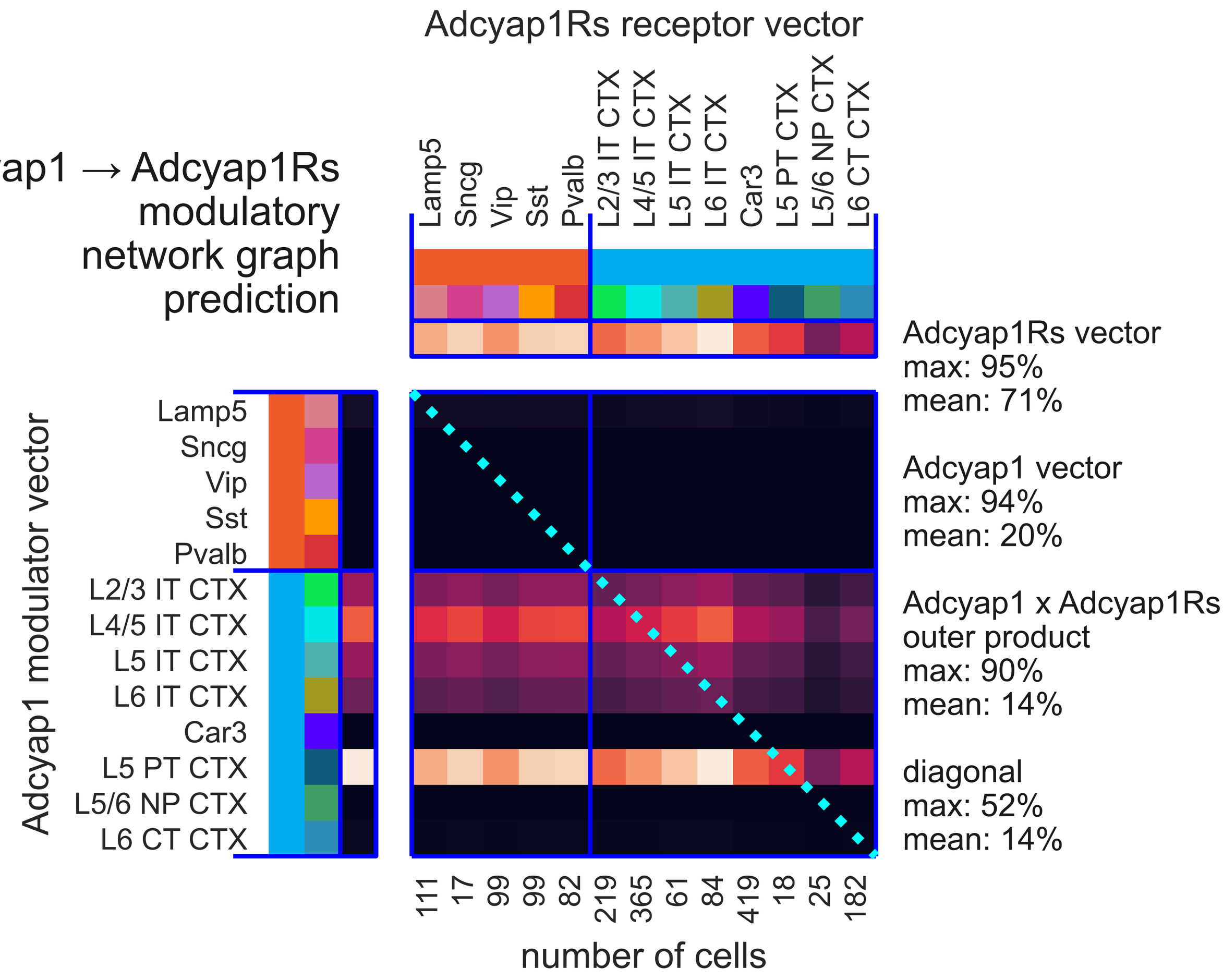
Adcyap1Rs vector
max: 98%
mean: 79%

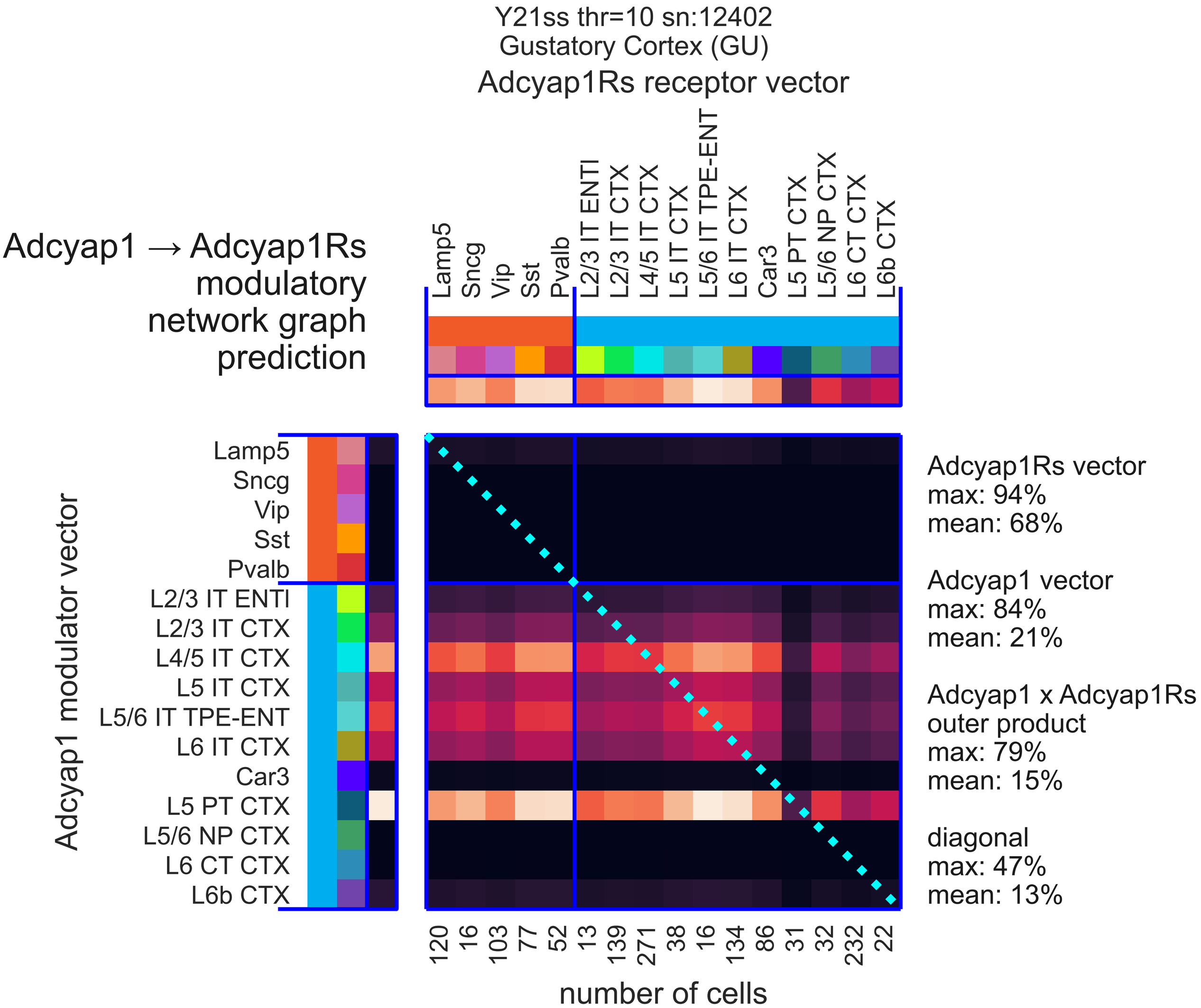
Adcyap1 vector
max: 94%
mean: 18%

Adcyap1 x Adcyap1Rs
outer product
max: 92%
mean: 14%

diagonal
max: 56%
mean: 13%

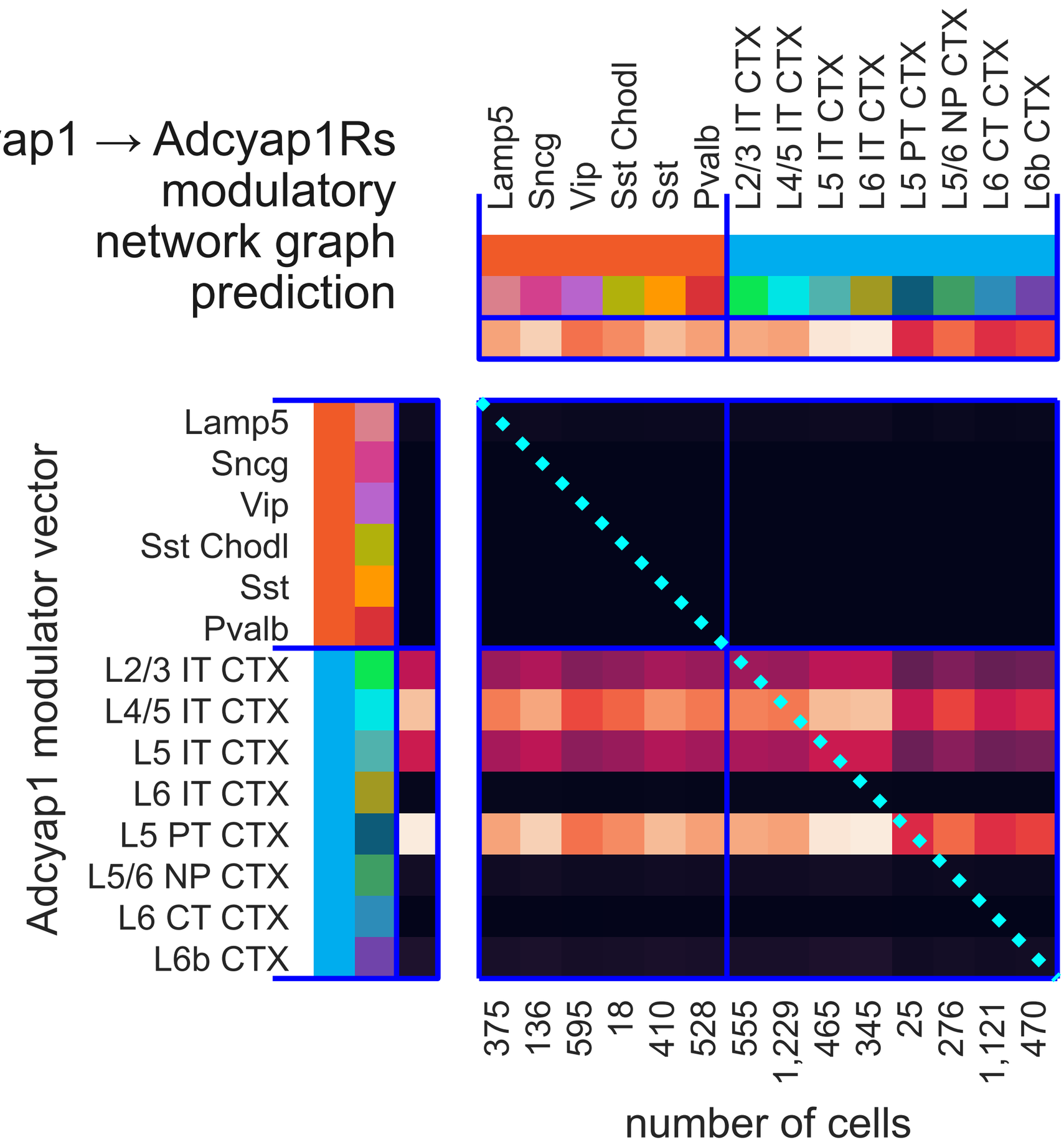
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)




Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
Adcyap1Rs receptor vector
Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Adcyap1 modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
Adcyap1Rs vector
max: 94%
mean: 68%
Adcyap1 vector
max: 84%
mean: 21%
Adcyap1 x Adcyap1Rs
outer product
max: 79%
mean: 15%
diagonal
max: 47%
mean: 13%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)

Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction



Adcyap1Rs vector
max: 95%
mean: 74%

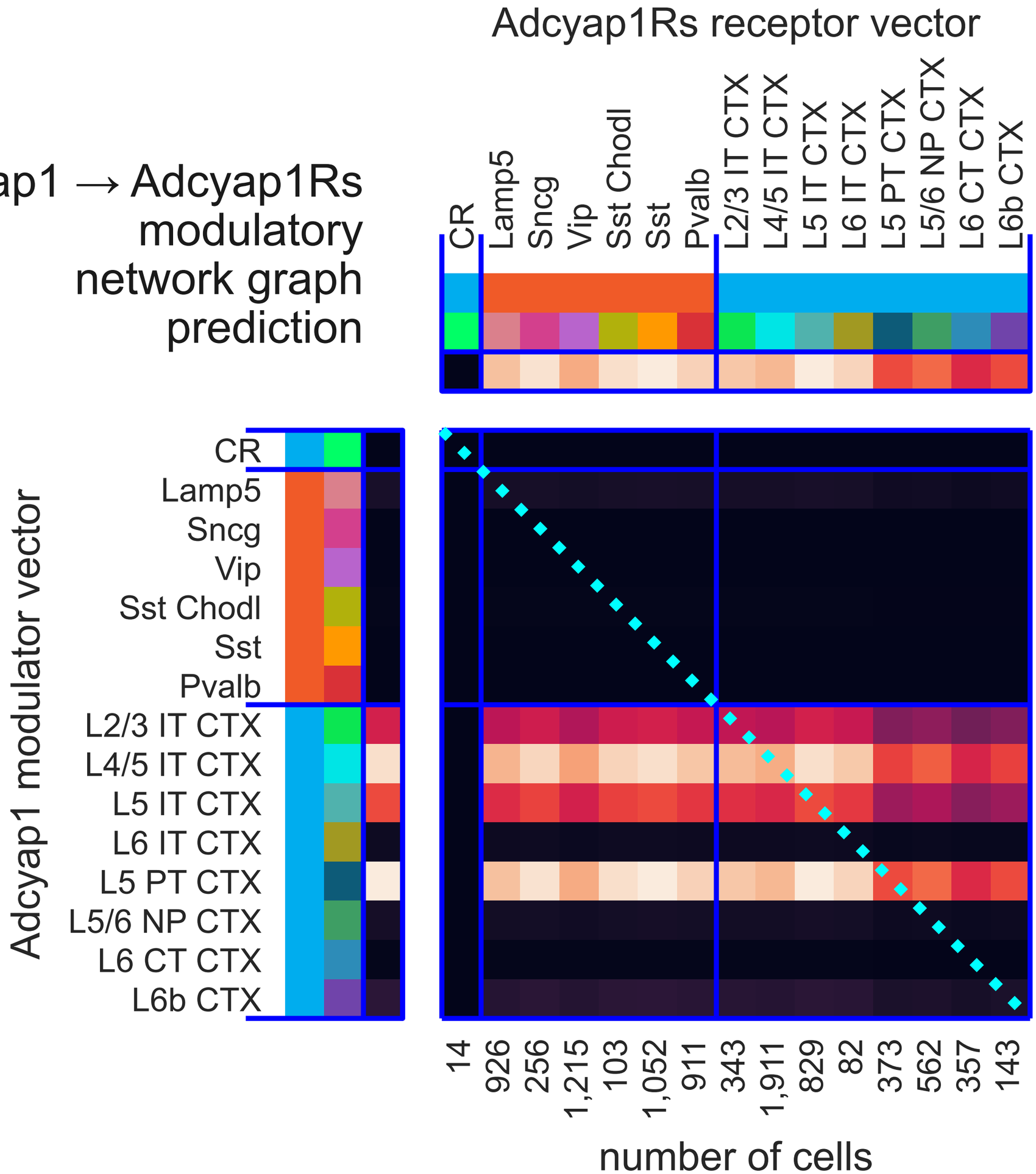
Adcyap1 vector
max: 100%
mean: 22%

Adcyap1 x Adcyap1Rs
outer product
max: 95%
mean: 16%

diagonal
max: 68%
mean: 15%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction



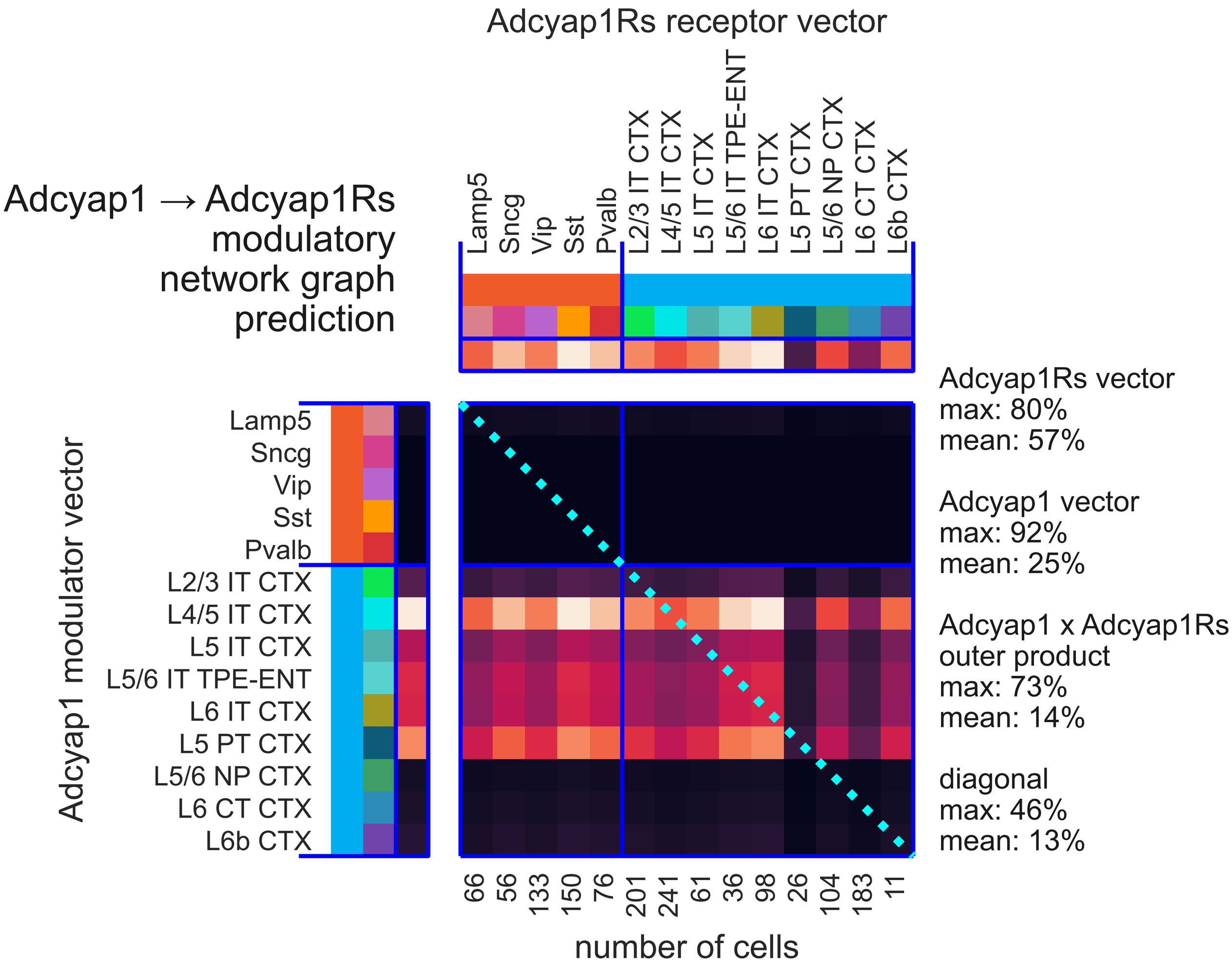
Adcyap1Rs vector
max: 98%
mean: 77%

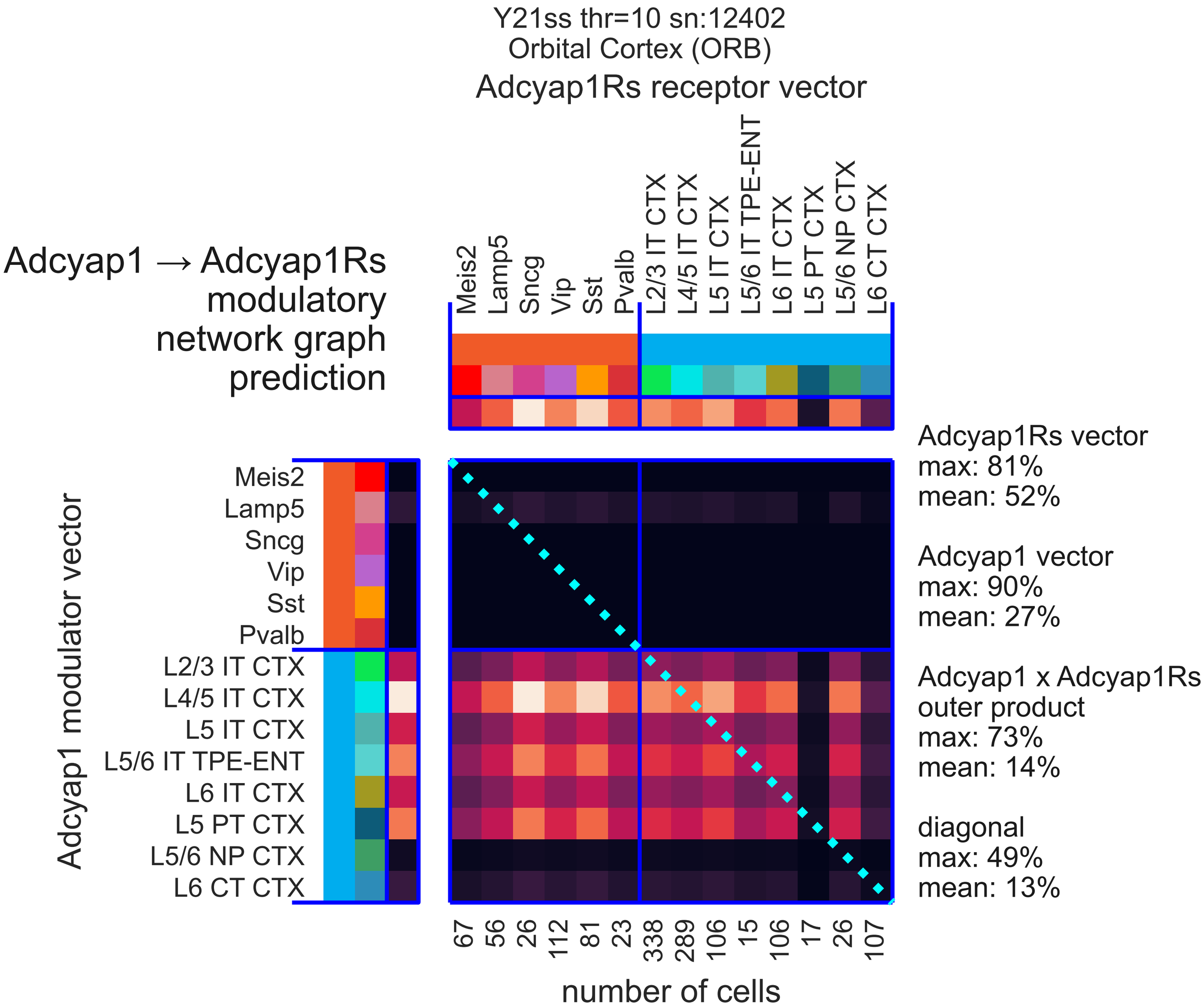
Adcyap1 vector
max: 99%
mean: 22%

Adcyap1 x Adcyap1Rs
outer product
max: 96%
mean: 17%

diagonal
max: 81%
mean: 18%

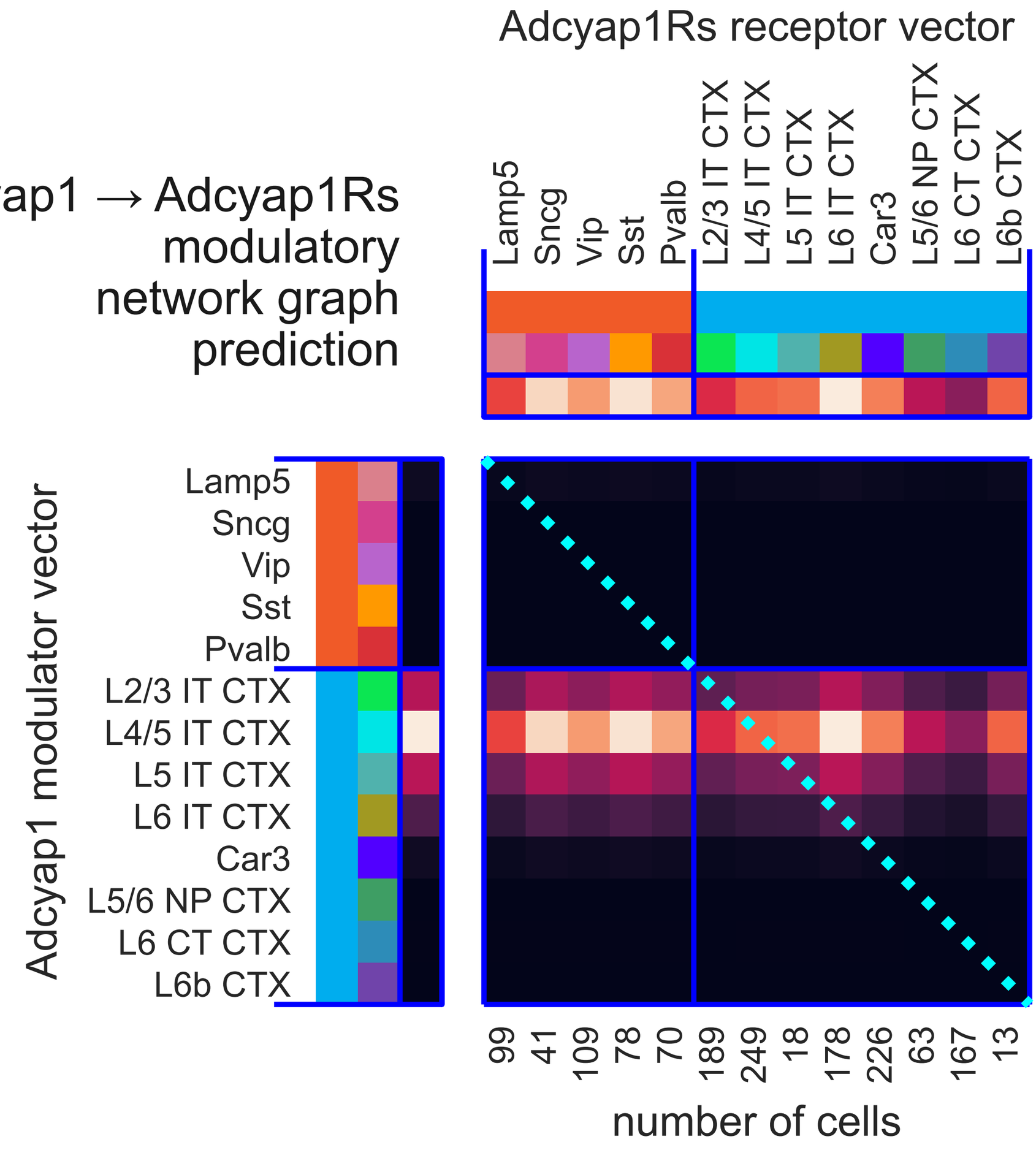
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)




Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
Adcyap1Rs receptor vector
Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Adcyap1 modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
Adcyap1Rs vector
max: 81%
mean: 52%
Adcyap1 vector
max: 90%
mean: 27%
Adcyap1 x Adcyap1Rs
outer product
max: 73%
mean: 14%
diagonal
max: 49%
mean: 13%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction



Adcyap1Rs vector
max: 80%
mean: 57%

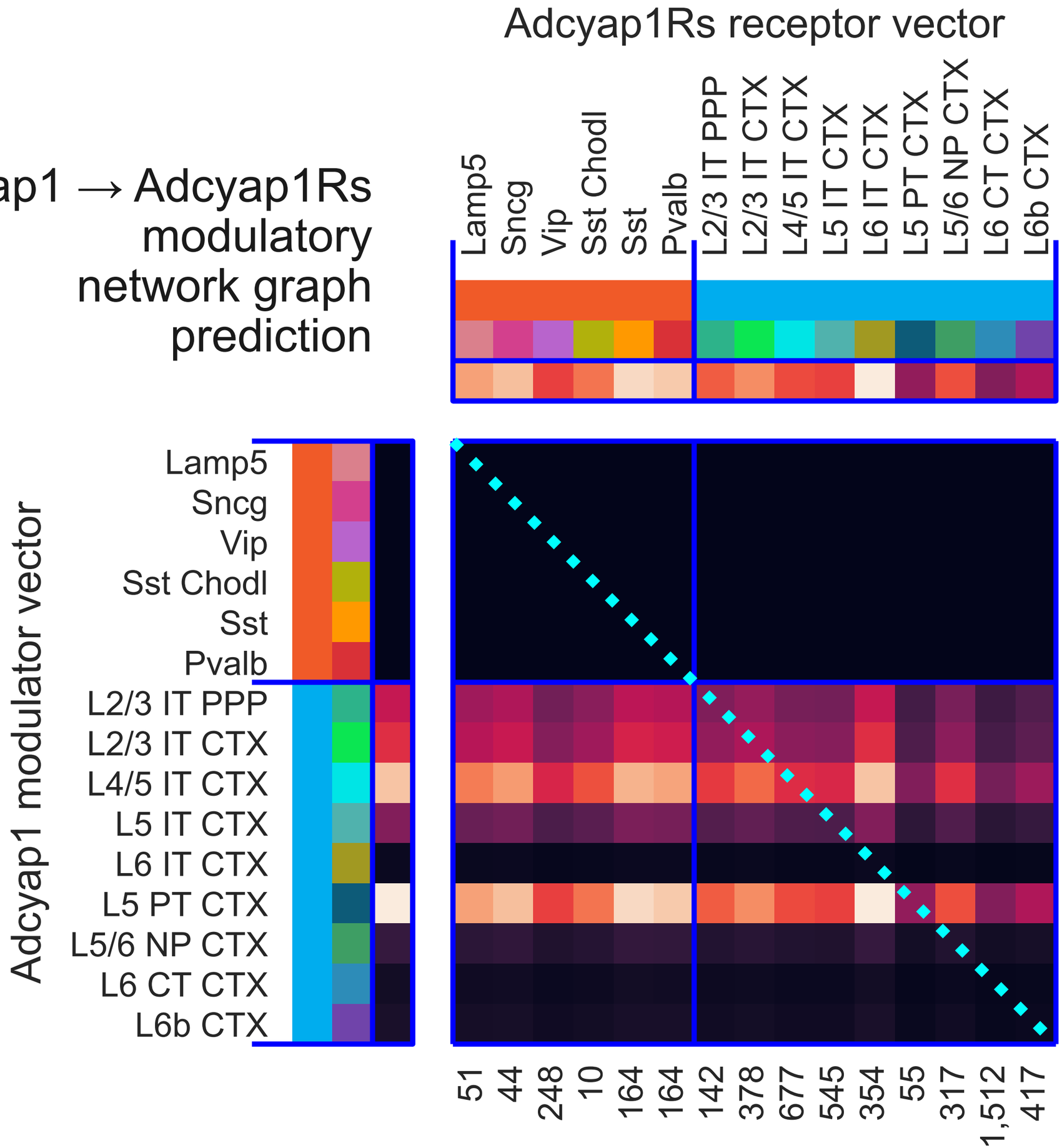
Adcyap1 vector
max: 86%
mean: 14%

Adcyap1 x Adcyap1Rs
outer product
max: 68%
mean: 8%

diagonal
max: 46%
mean: 8%

Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction



Adcyap1Rs vector
max: 85%
mean: 58%

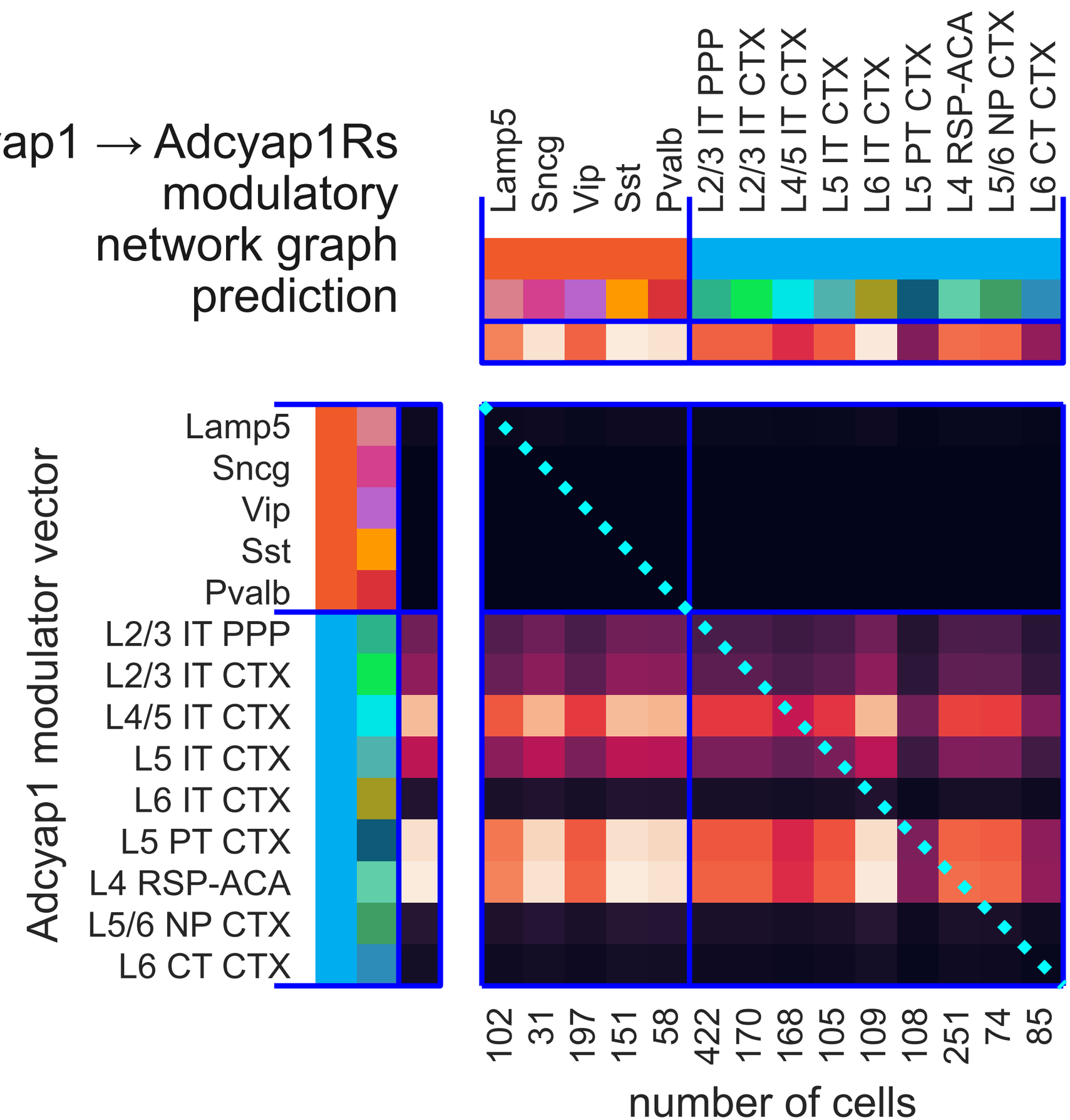
Adcyap1 vector
max: 91%
mean: 22%

Adcyap1 x Adcyap1Rs
outer product
max: 77%
mean: 13%

diagonal
max: 43%
mean: 10%

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)

Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction



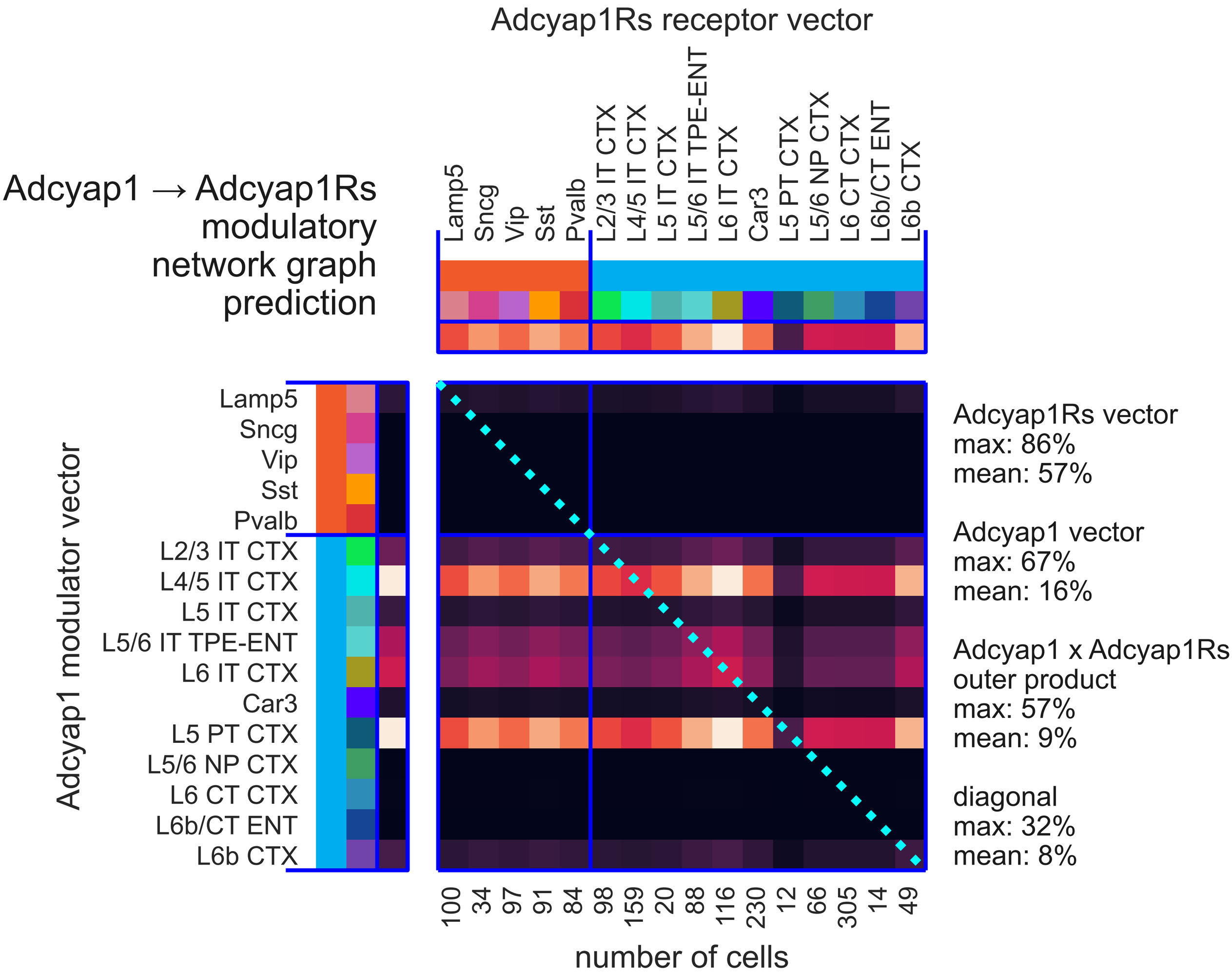
Adcyap1Rs vector
max: 79%
mean: 57%

Adcyap1 vector
max: 92%
mean: 28%

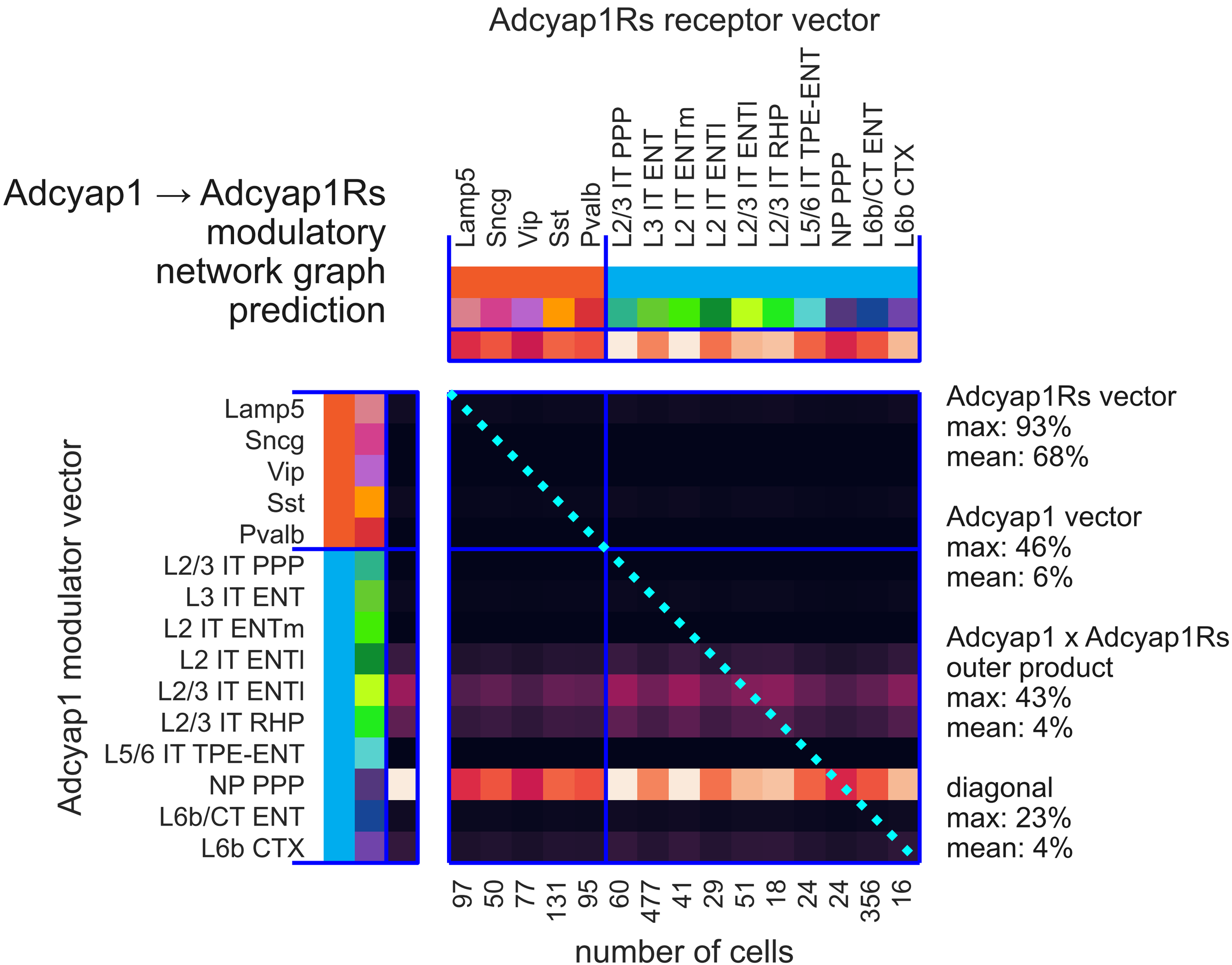
Adcyap1 x Adcyap1Rs
outer product
max: 73%
mean: 16%

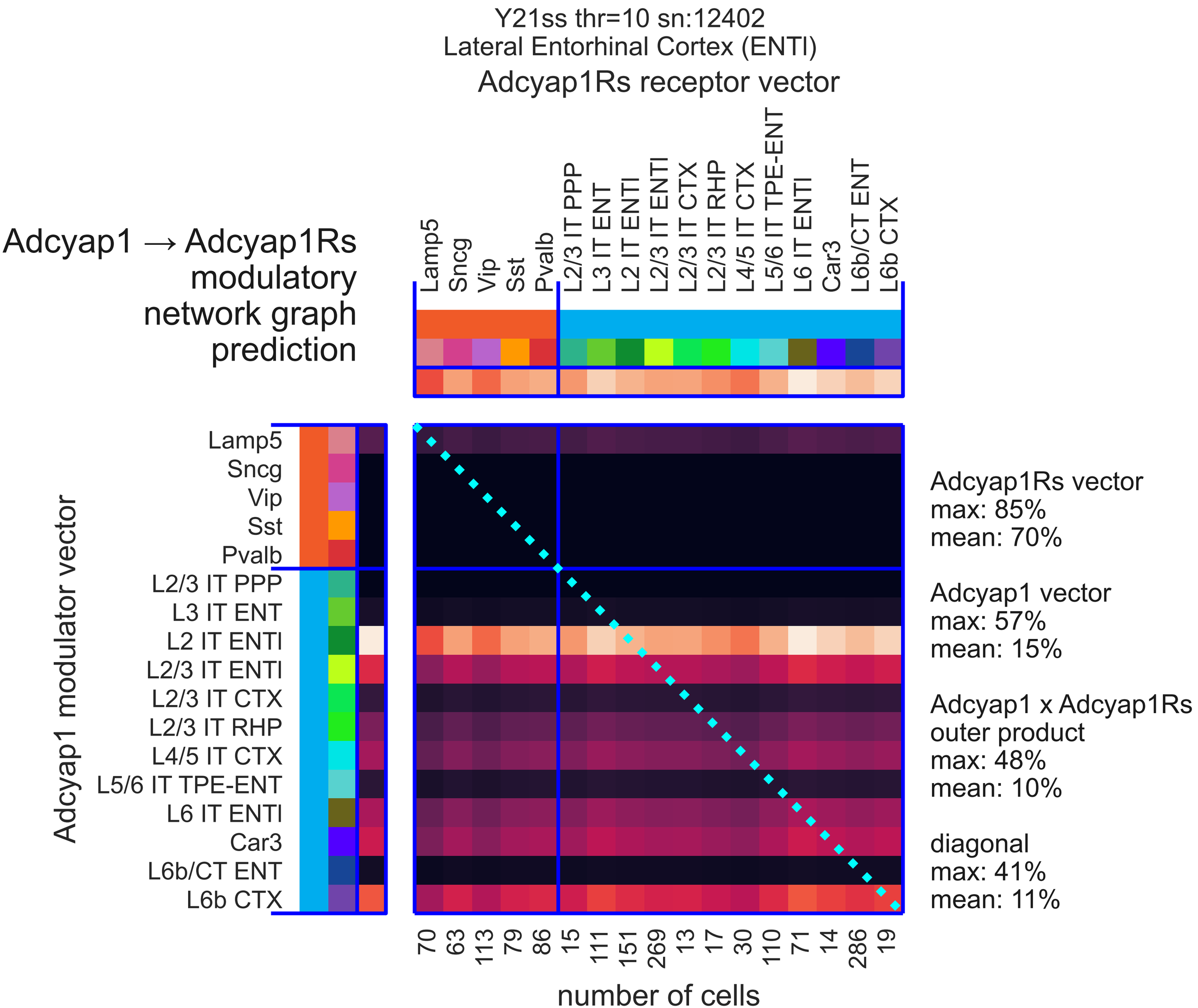
diagonal
max: 50%
mean: 13%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

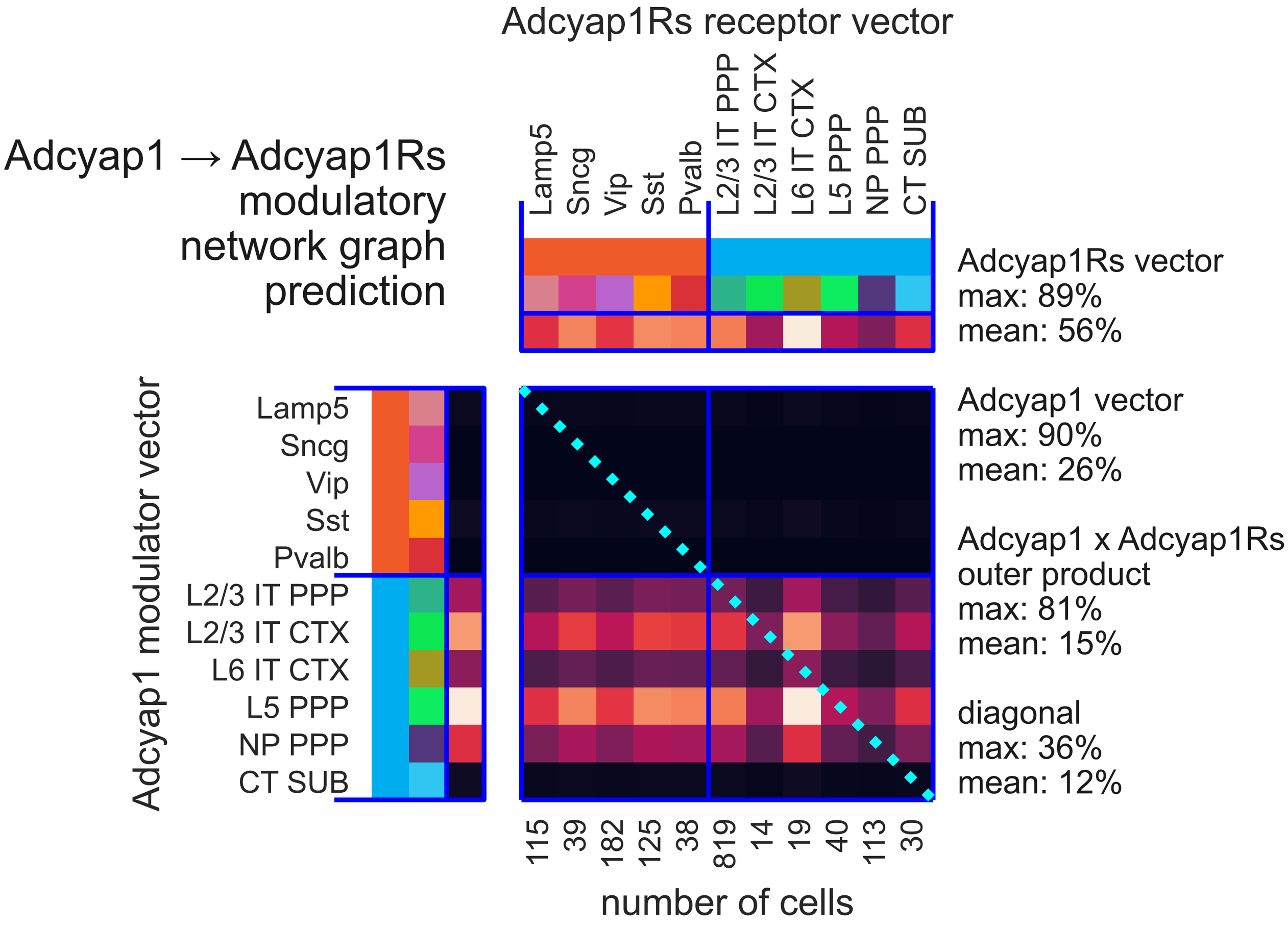


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)



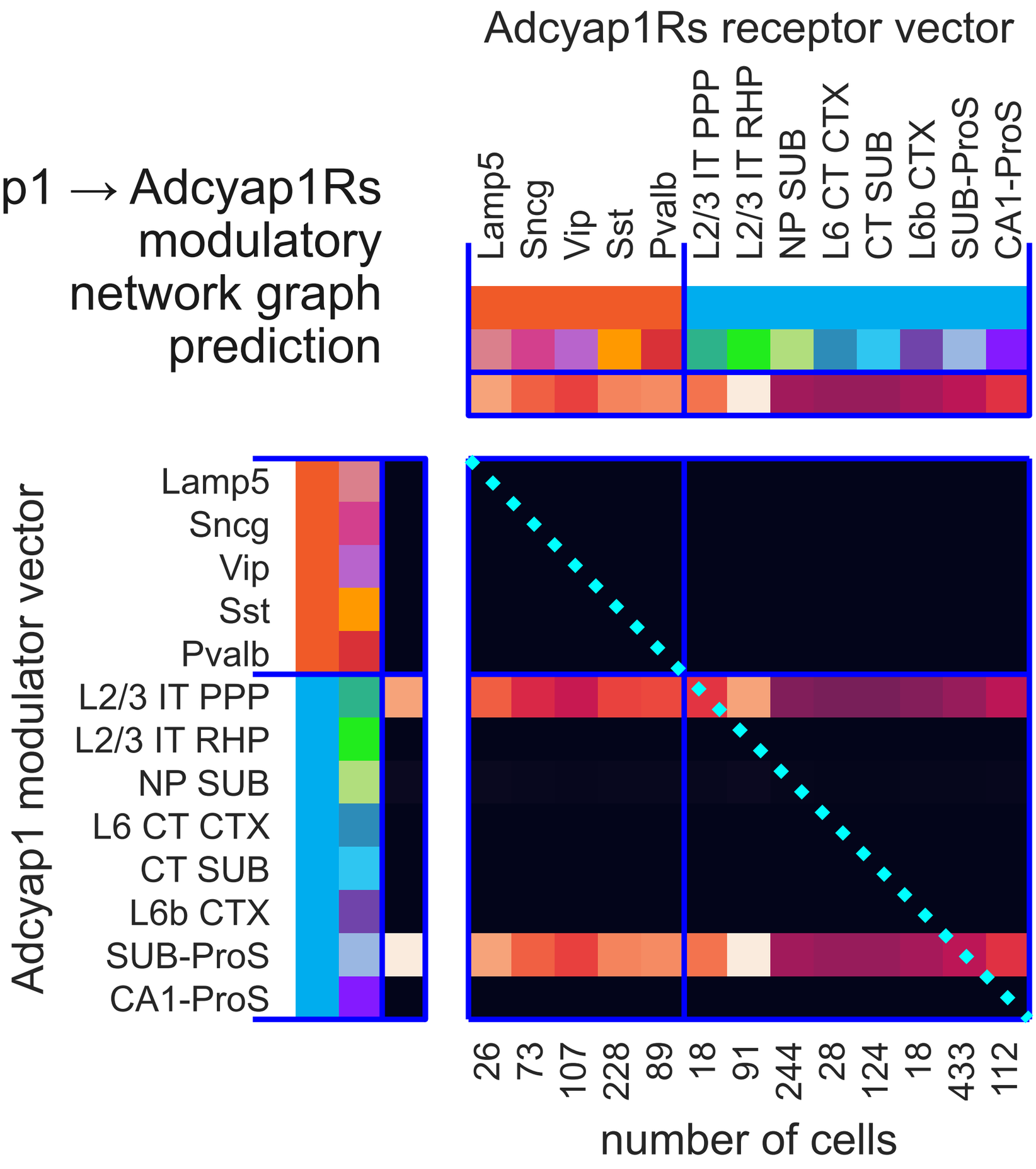

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
Adcyap1Rs receptor vector
Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Adcyap1 modulator vector
Adcyap1Rs vector
max: 85%
mean: 70%
Adcyap1 vector
max: 57%
mean: 15%
Adcyap1 x Adcyap1Rs
outer product
max: 48%
mean: 10%
diagonal
max: 41%
mean: 11%
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)

Adcyap1 → Adcyap1Rs
modulatory
network graph
prediction



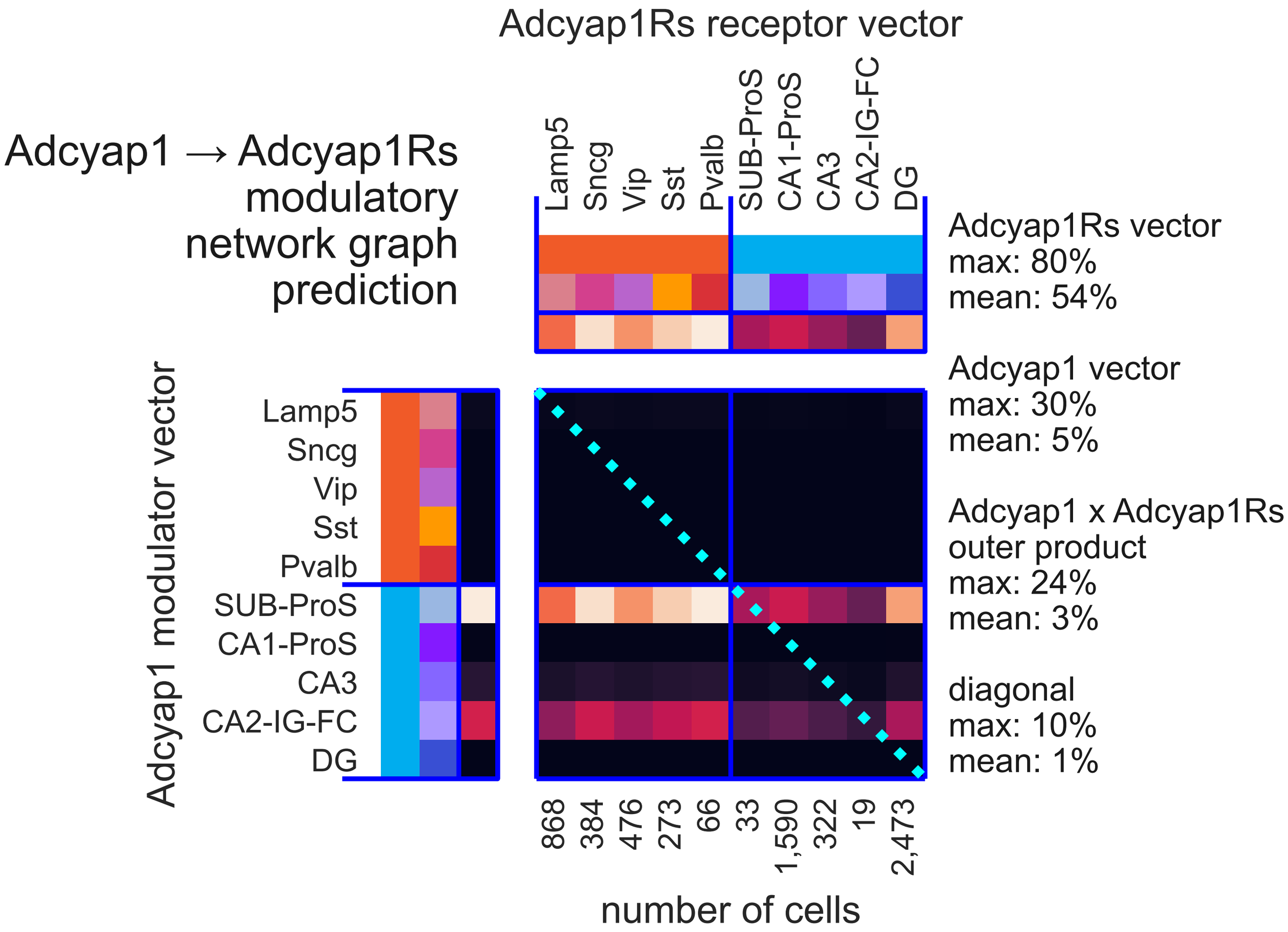
Adcyap1Rs vector
max: 95%
mean: 57%

Adcyap1 vector
max: 55%
mean: 8%

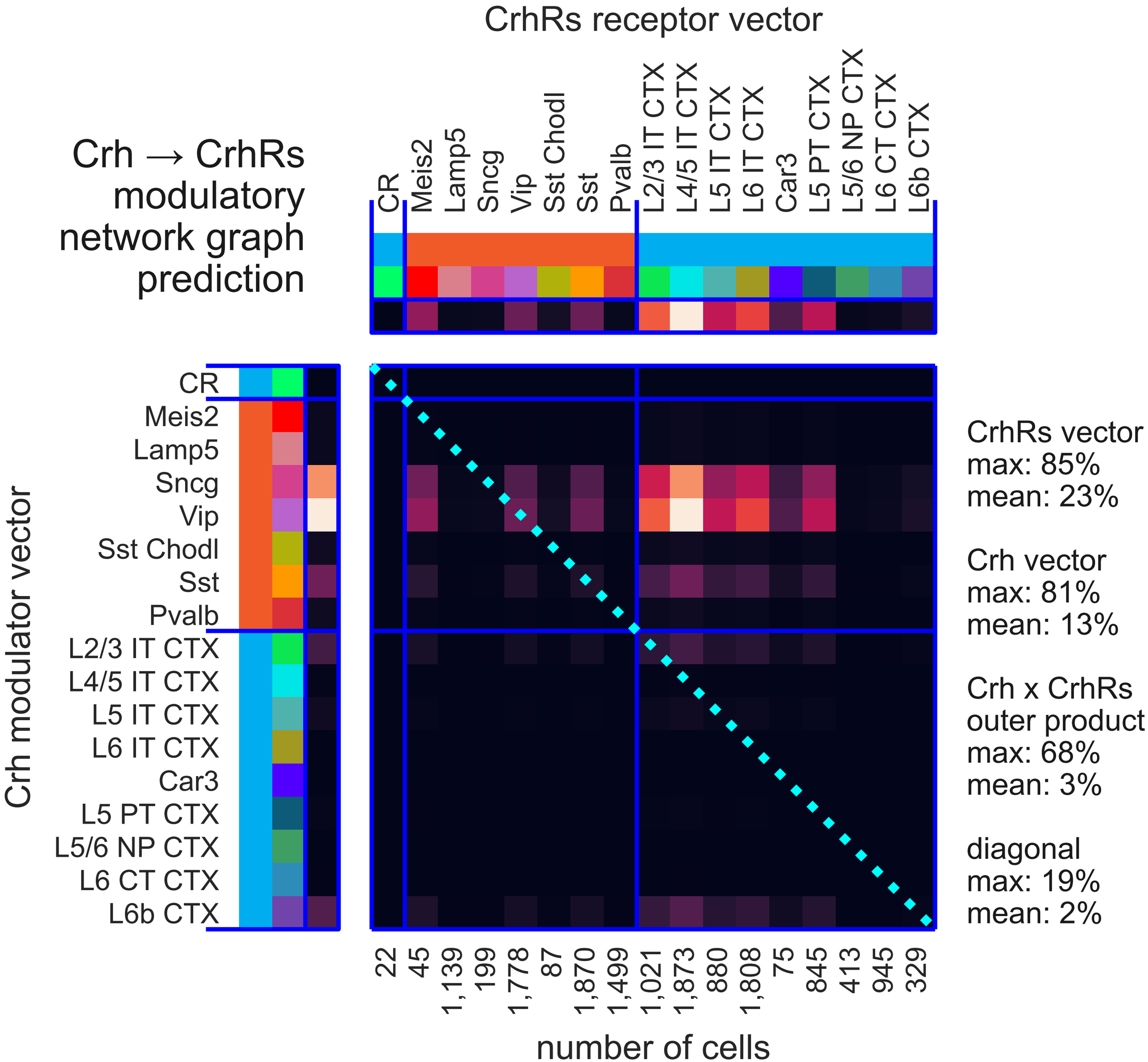
Adcyap1 x Adcyap1Rs
outer product
max: 52%
mean: 4%

diagonal
max: 30%
mean: 4%

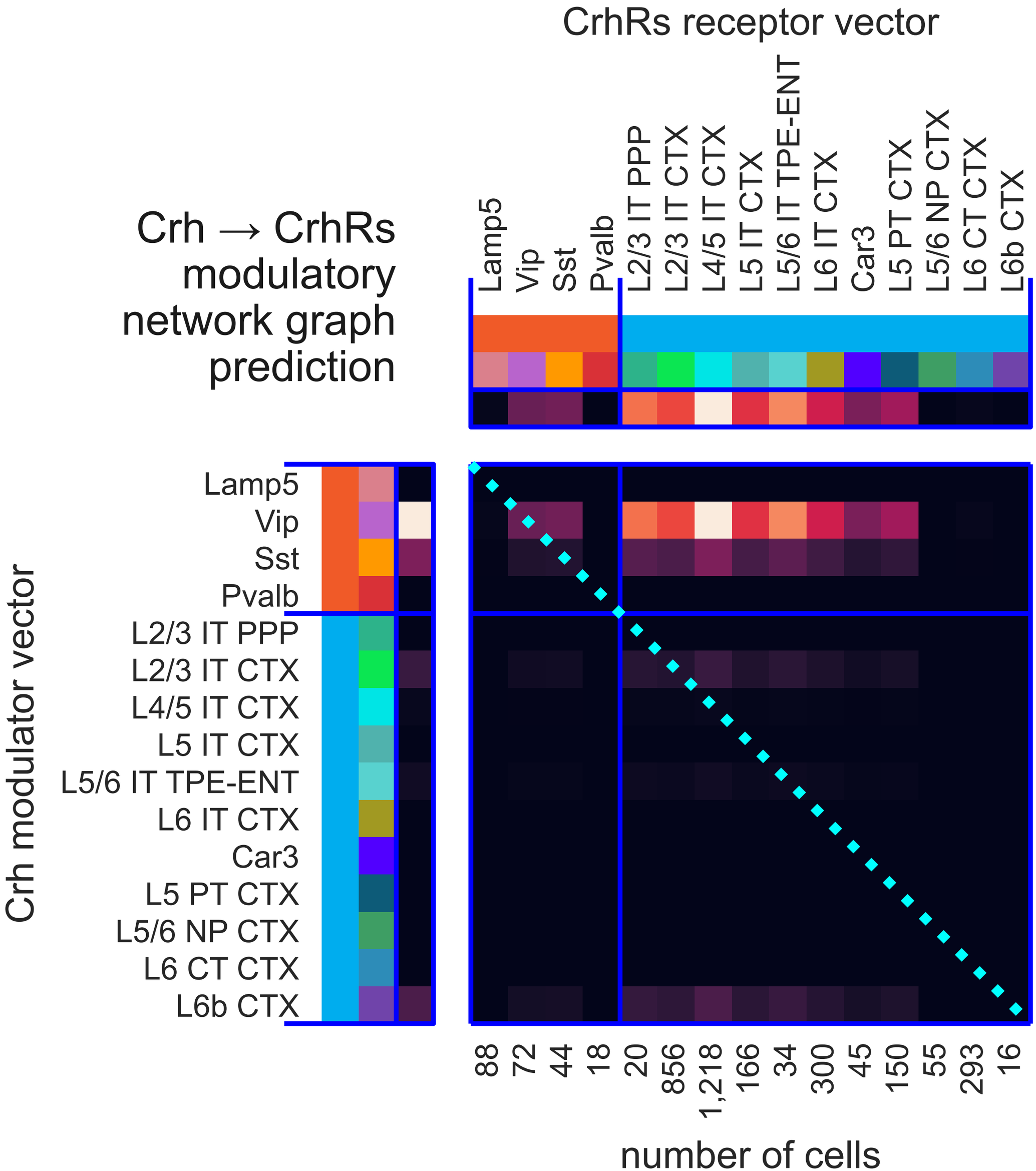
Y21ss thr=10 sn:12402
Hippocampus (HIP)



Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



Y21ss thr=10 sn:12402
Visual Cortex (VIS)



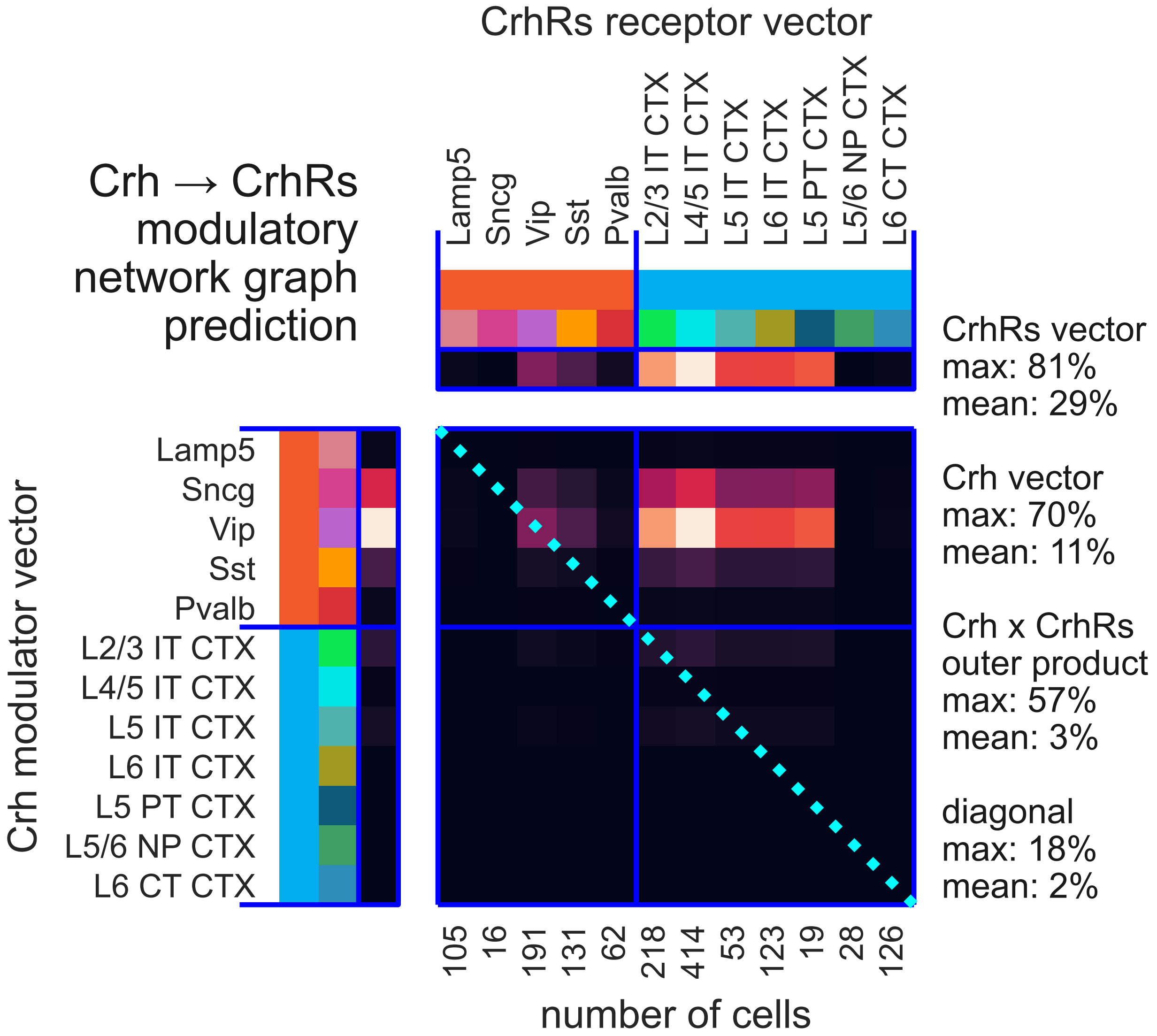
CrhRs vector
max: 78%
mean: 28%

Crh vector
max: 64%
mean: 7%

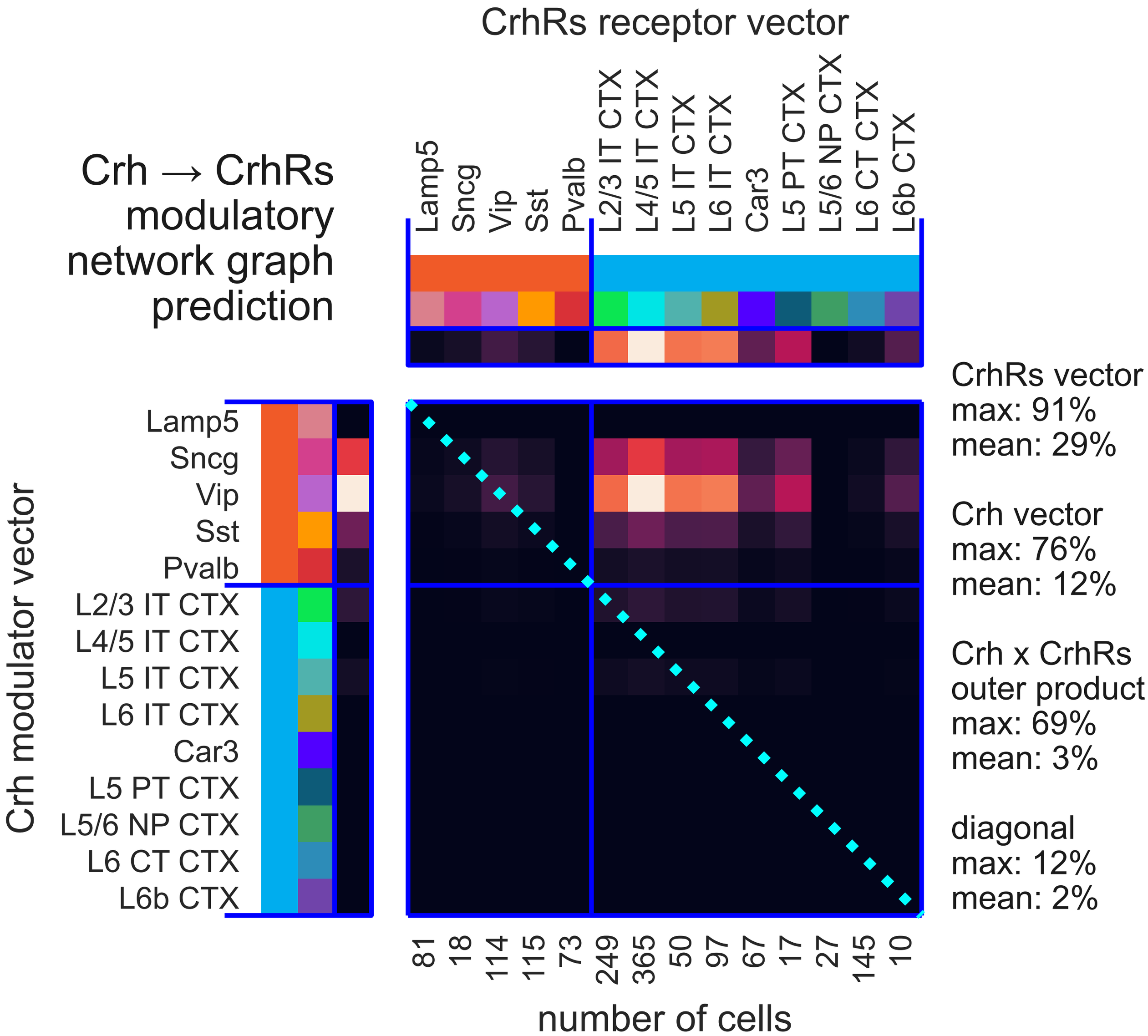
Crh x CrhRs
outer product
max: 50%
mean: 2%

diagonal
max: 13%
mean: 2%

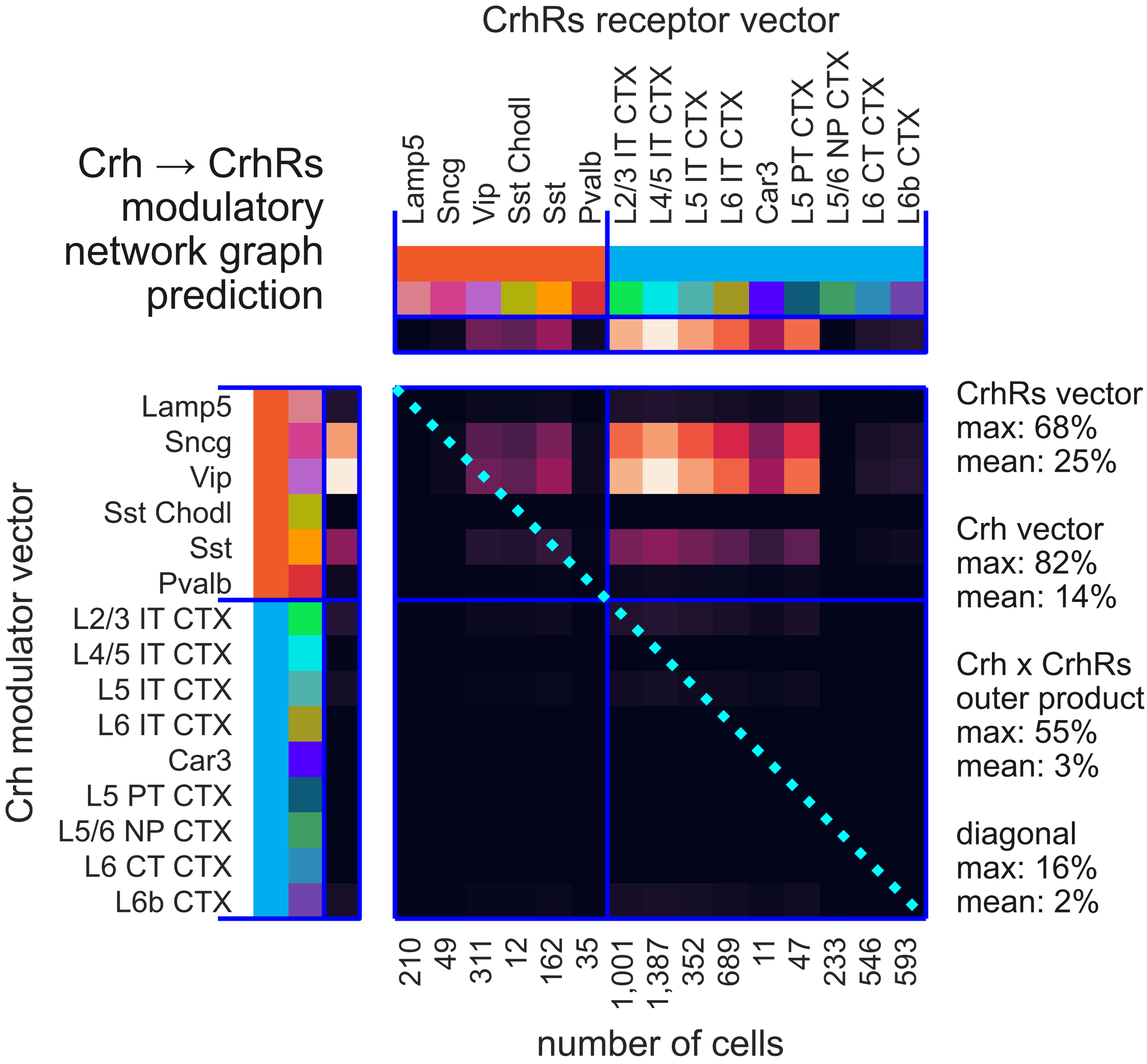
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



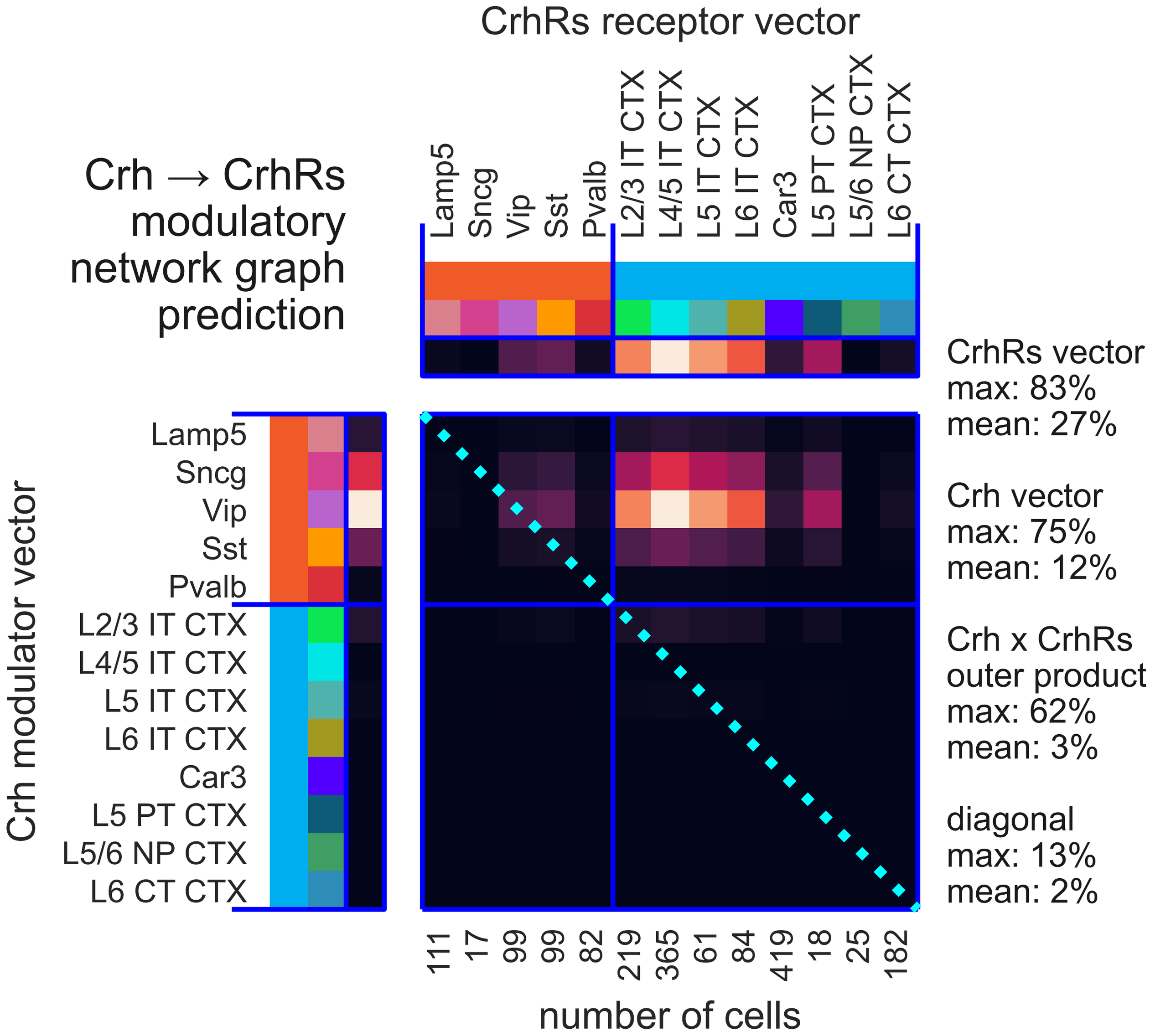
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

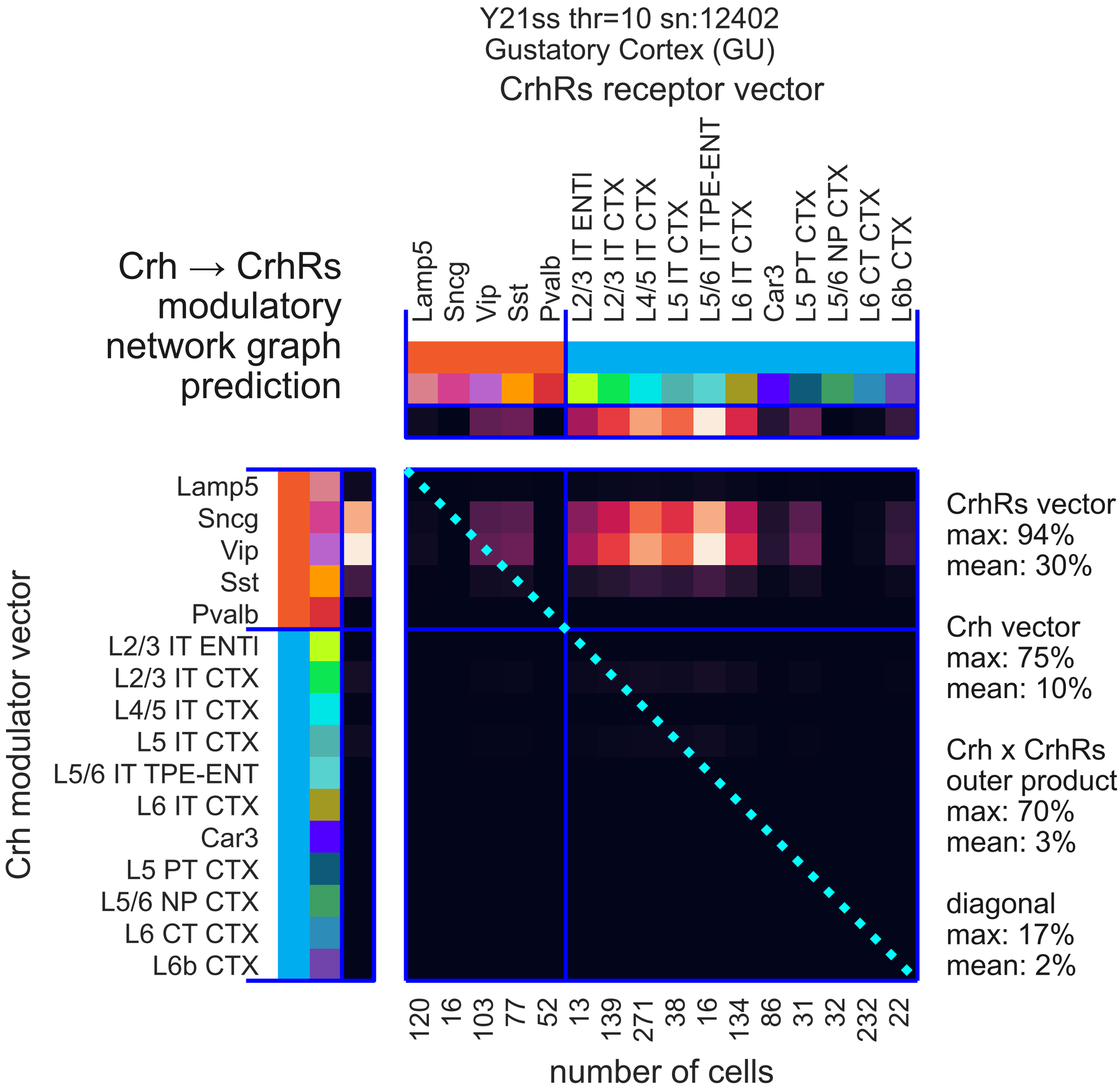


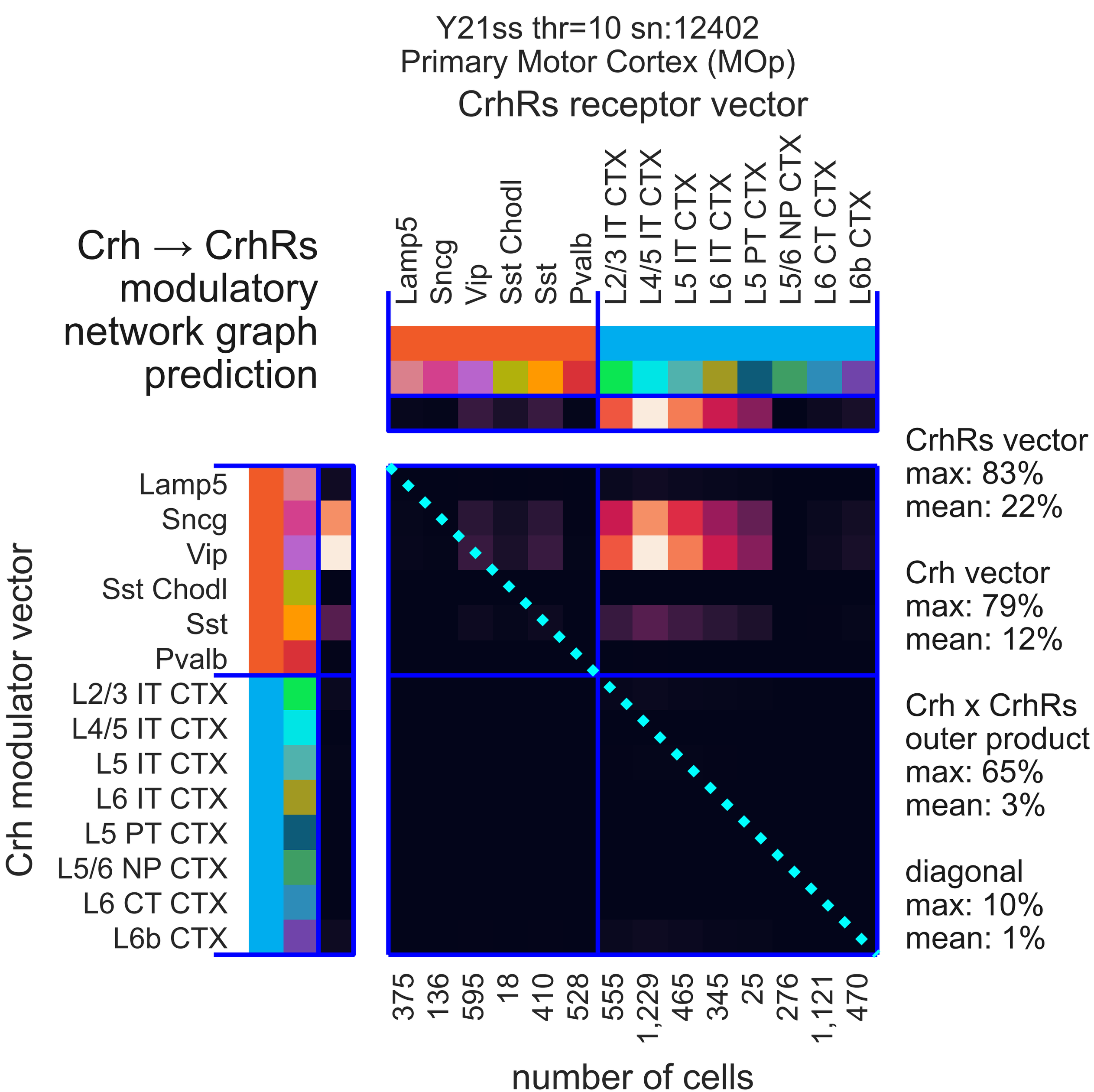
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



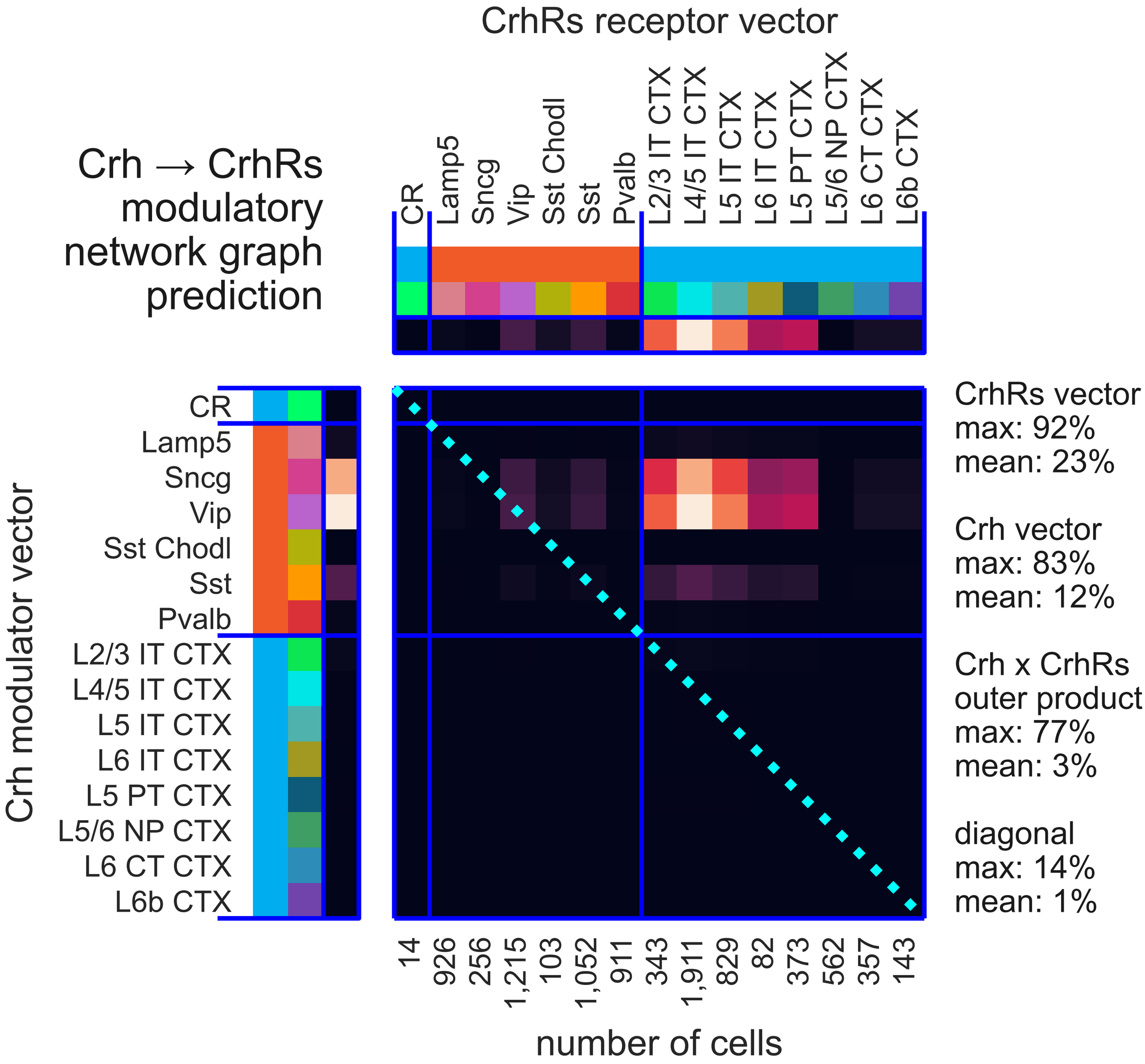
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



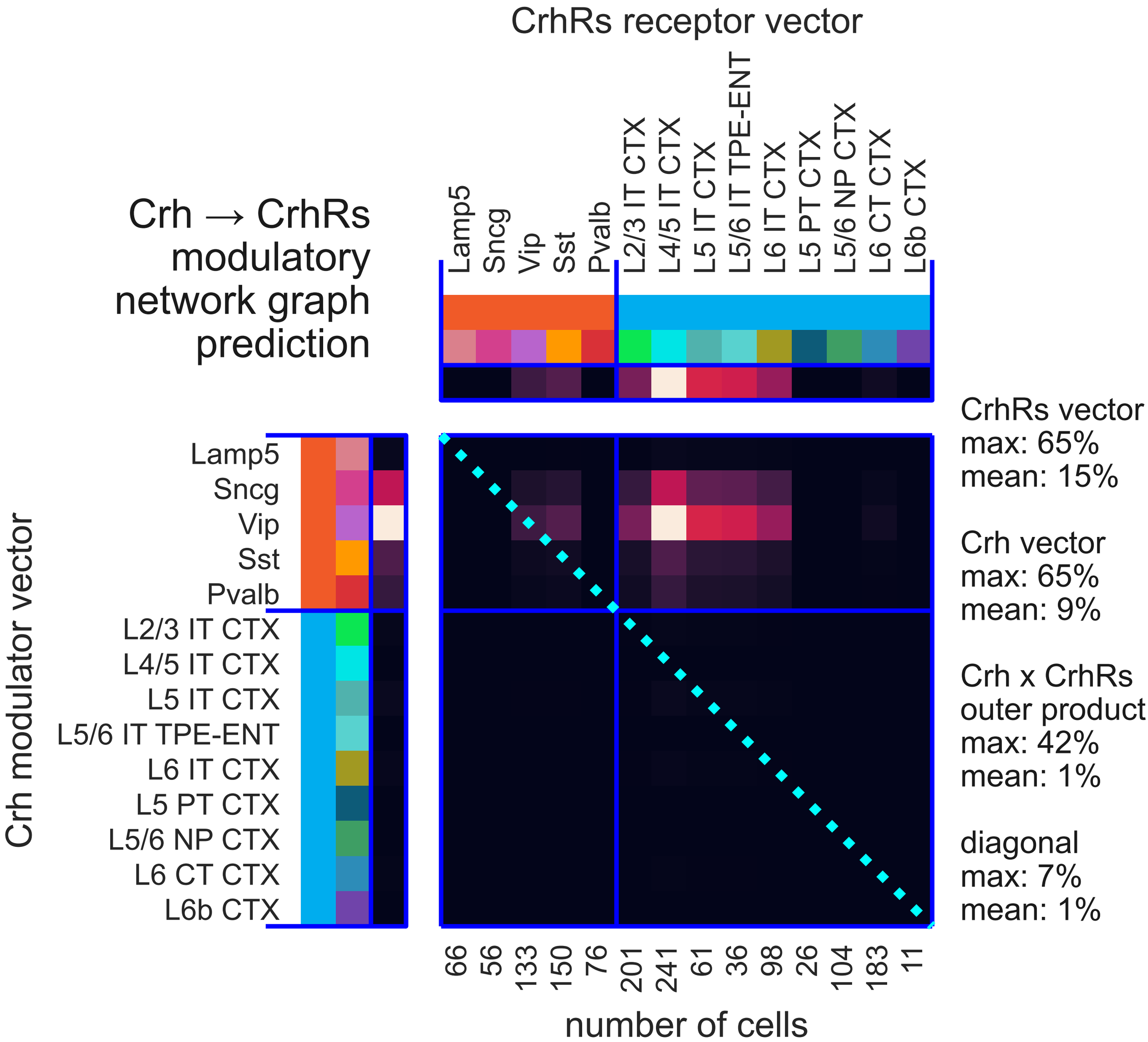

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
CrhRs receptor vector
Crh → CrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Crh modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
CrhRs vector
max: 94%
mean: 30%
Crh vector
max: 75%
mean: 10%
Crh x CrhRs
outer product
max: 70%
mean: 3%
diagonal
max: 17%
mean: 2%

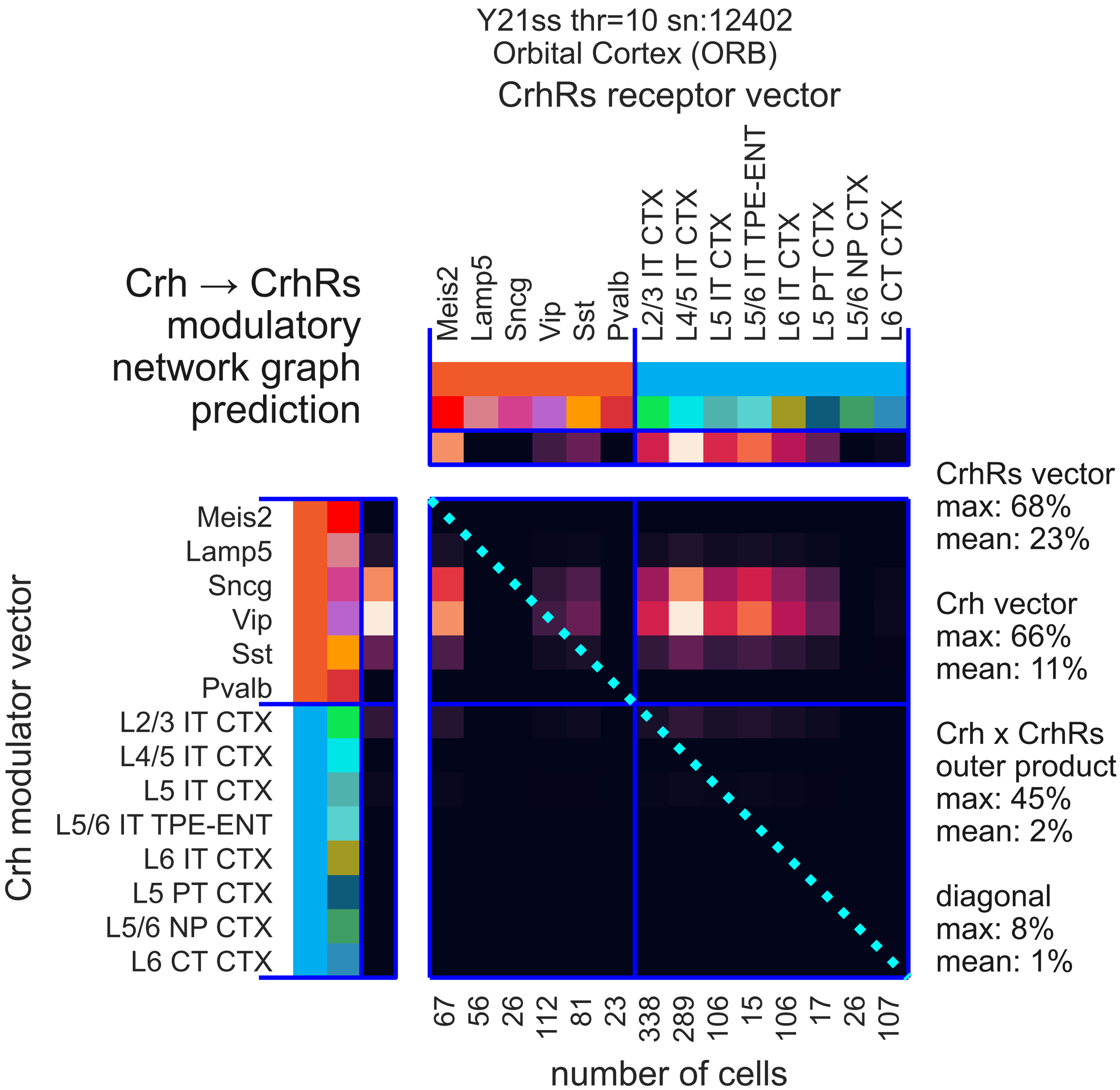

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
CrhRs receptor vector
Crh → CrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Crh modulator vector
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells
CrhRs vector
max: 83%
mean: 22%
Crh vector
max: 79%
mean: 12%
Crh x CrhRs
outer product
max: 65%
mean: 3%
diagonal
max: 10%
mean: 1%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

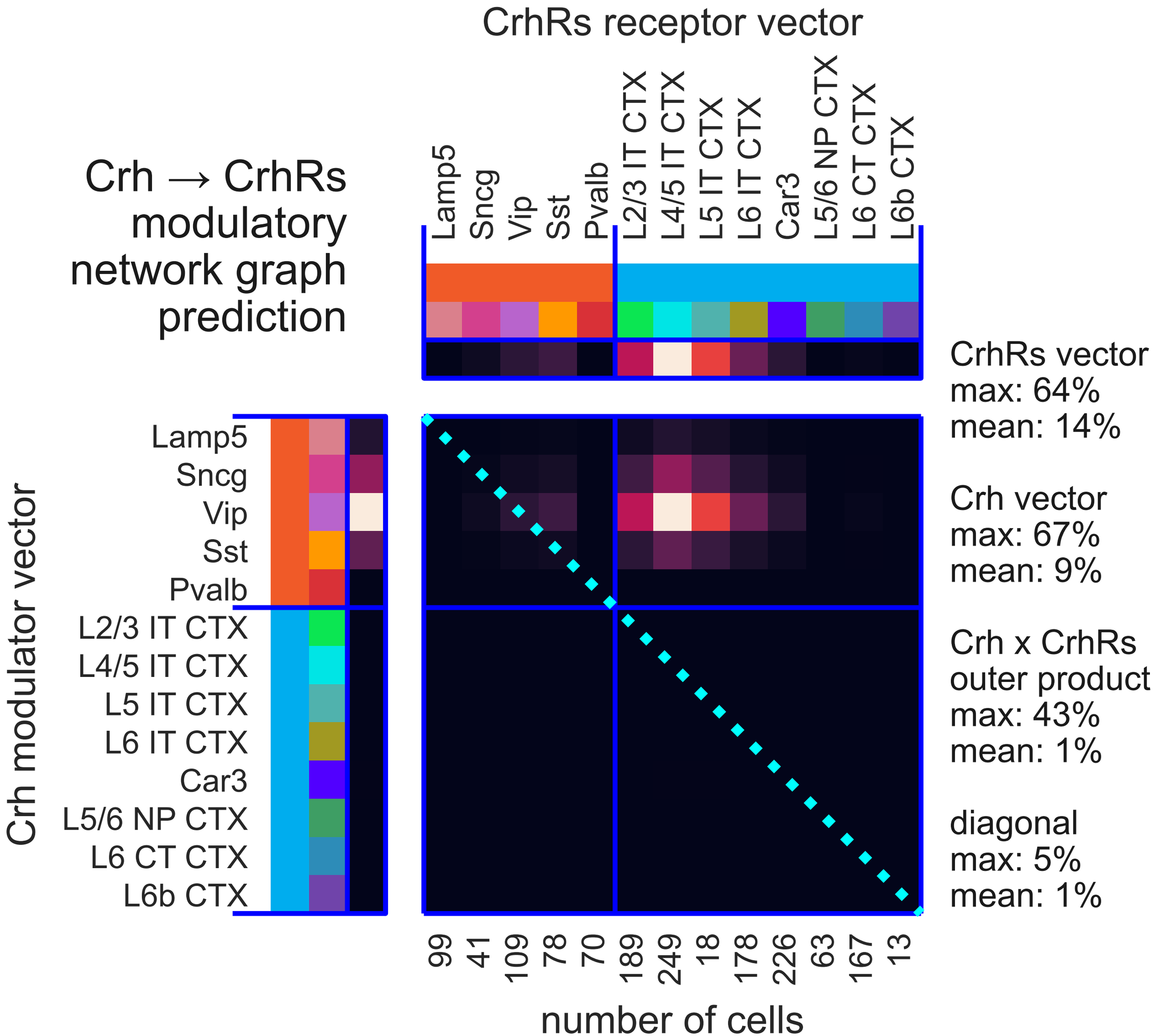


Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

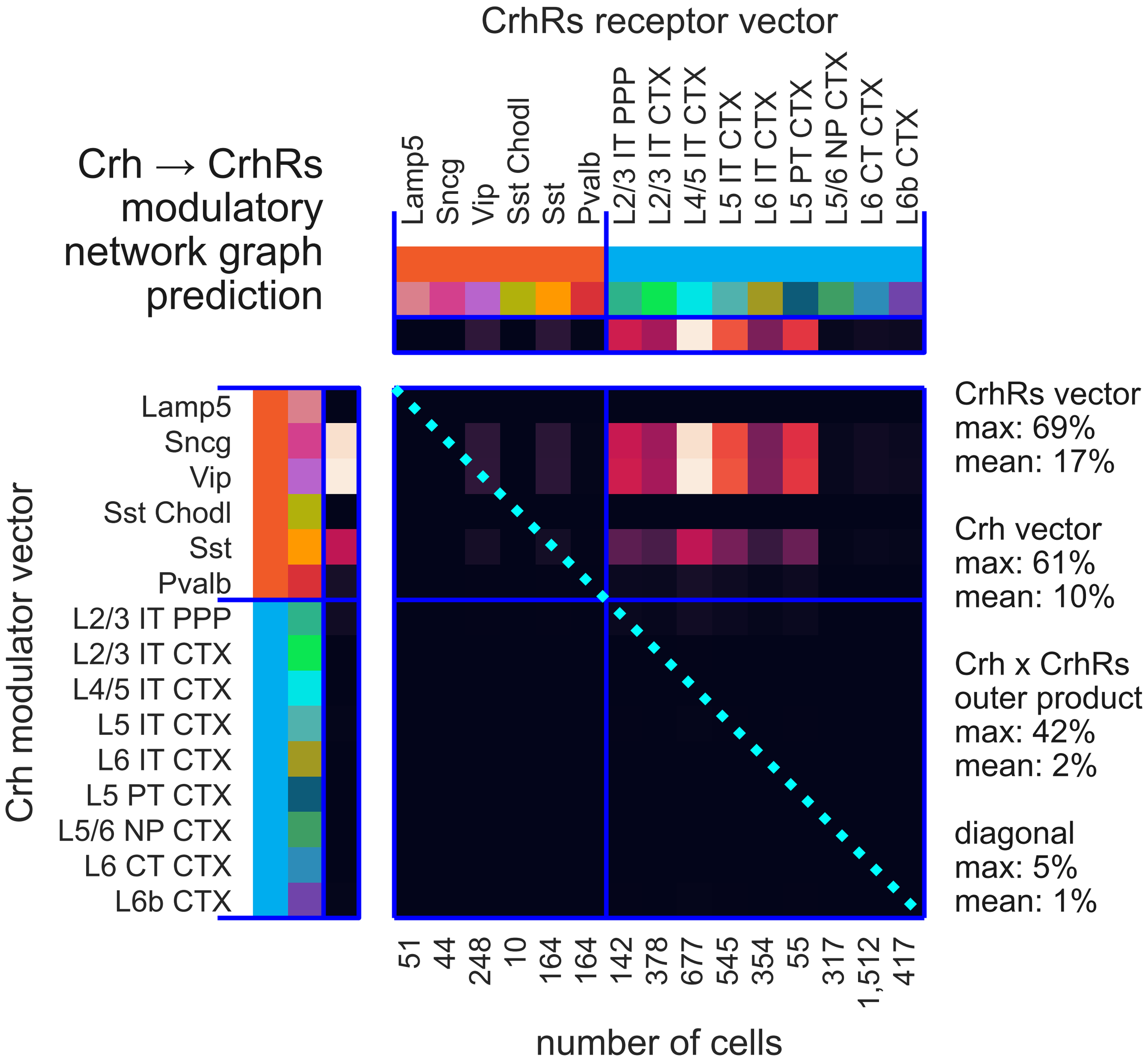


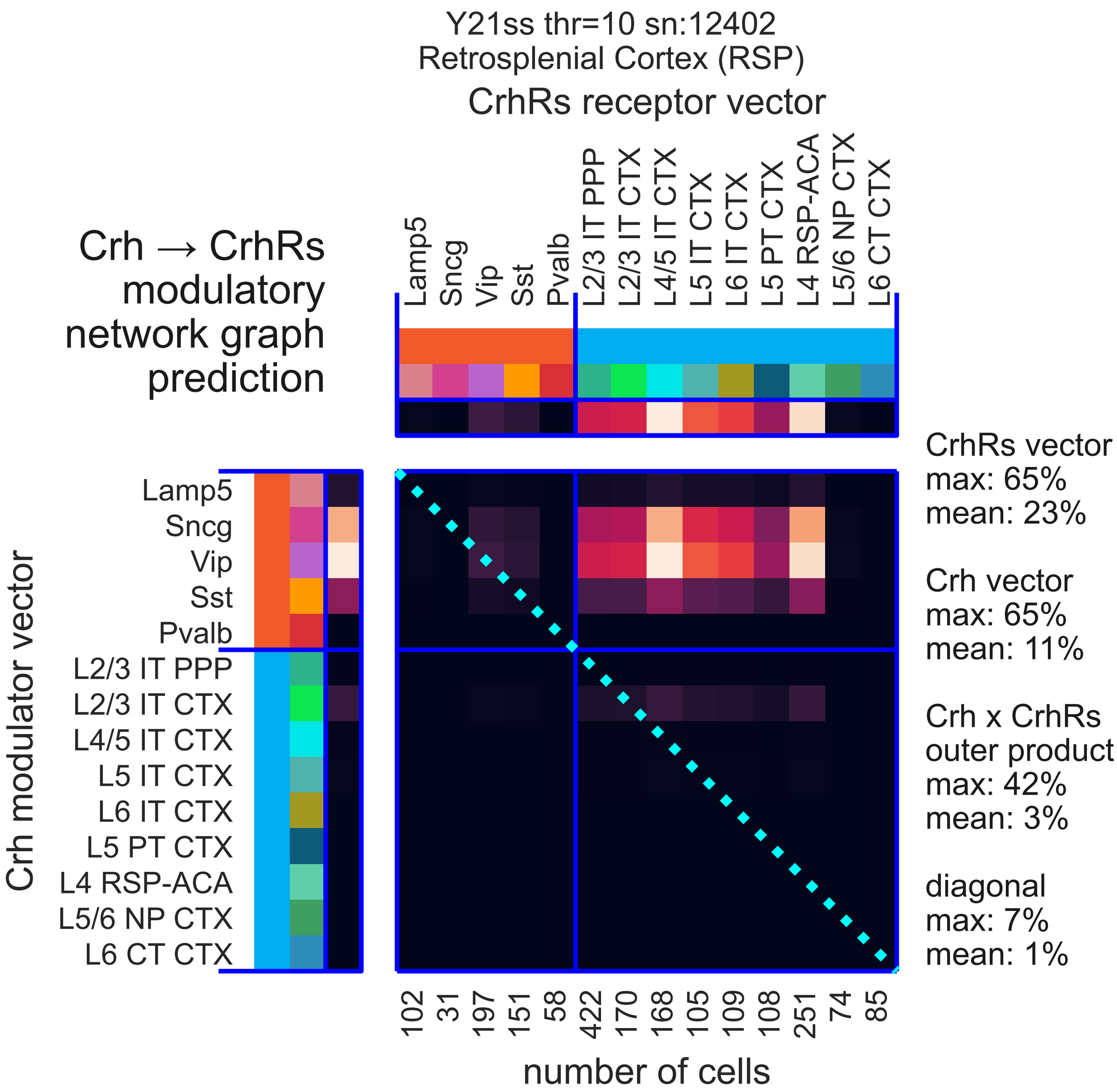

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
CrhRs receptor vector
Crh → CrhRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Crh modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
CrhRs vector
max: 68%
mean: 23%
Crh vector
max: 66%
mean: 11%
Crh x CrhRs
outer product
max: 45%
mean: 2%
diagonal
max: 8%
mean: 1%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

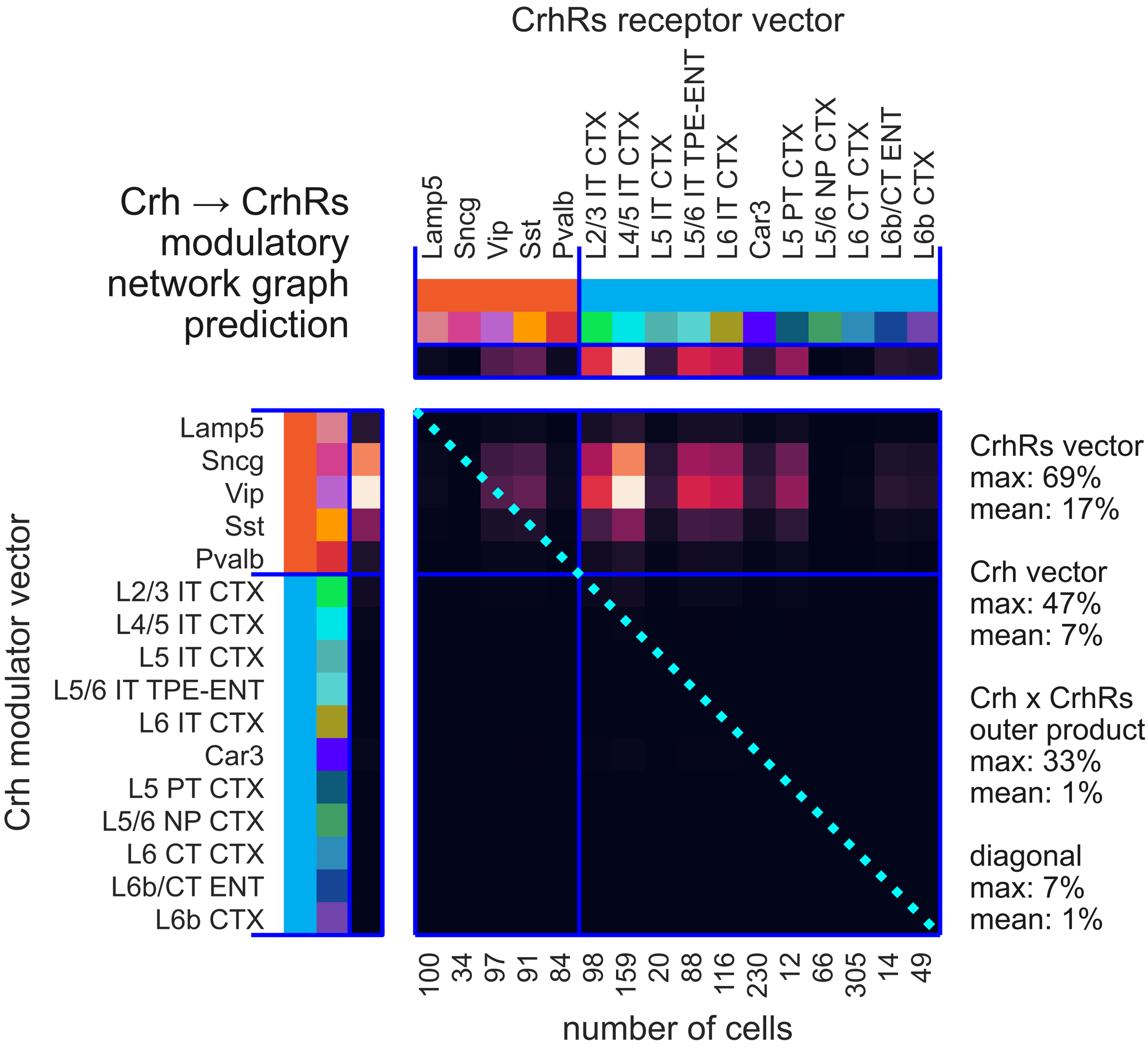


Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

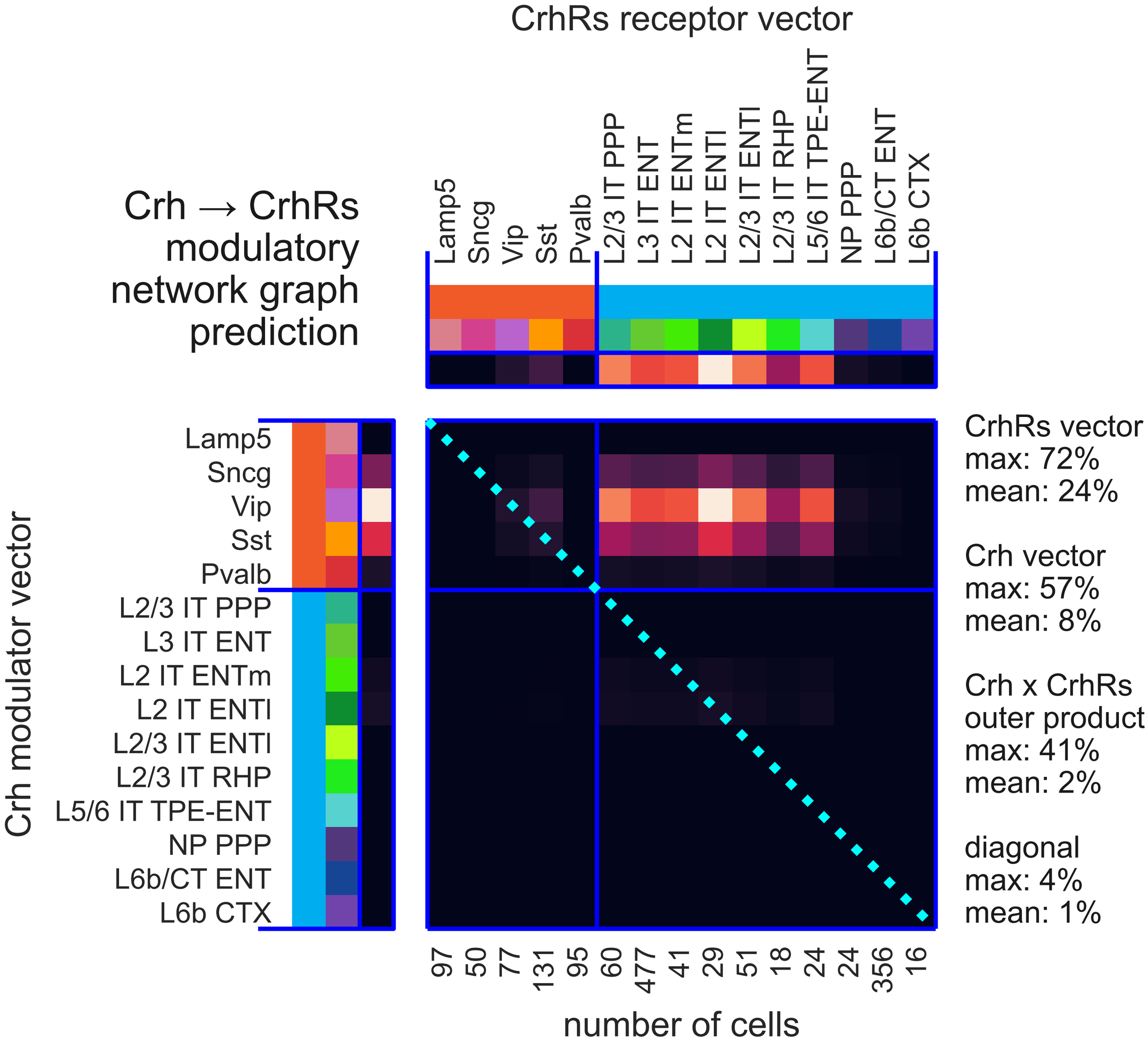


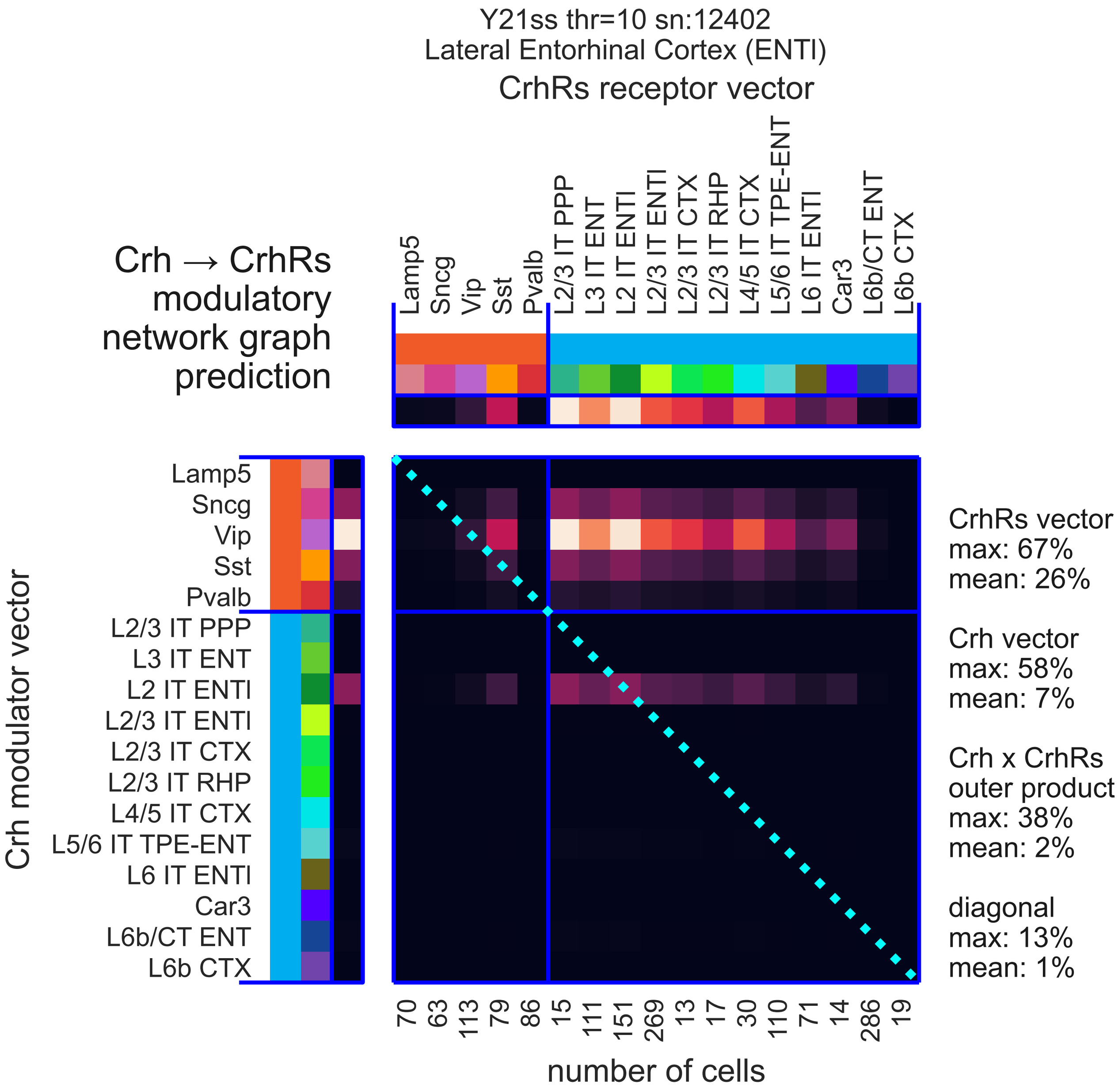

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
CrhRs receptor vector
Crh → CrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Crh modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
CrhRs vector
max: 65%
mean: 23%
Crh vector
max: 65%
mean: 11%
Crh x CrhRs
outer product
max: 42%
mean: 3%
diagonal
max: 7%
mean: 1%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

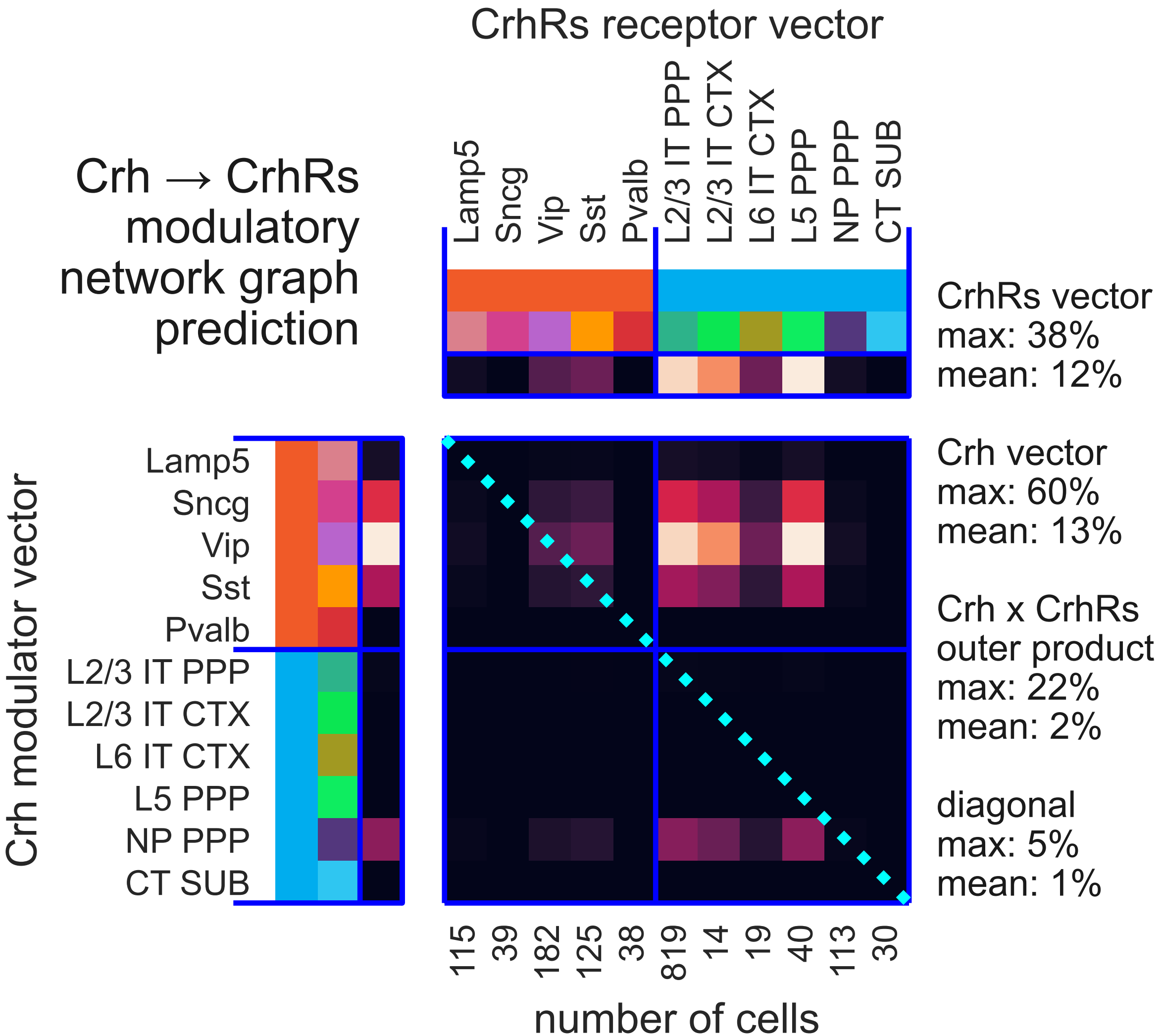


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

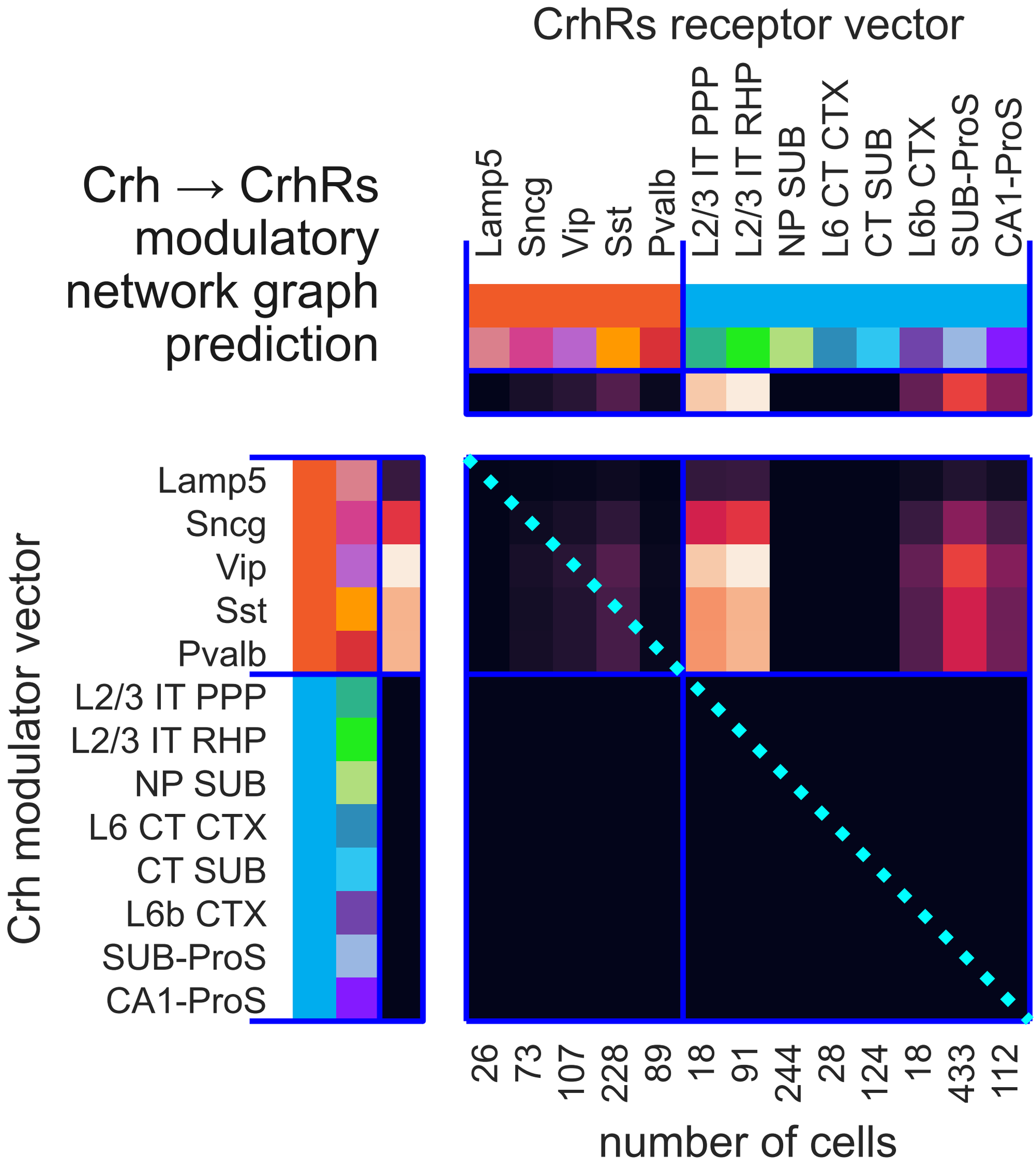



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
CrhRs receptor vector
Crh → CrhRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Crh modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
CrhRs vector
max: 67%
mean: 26%
Crh vector
max: 58%
mean: 7%
Crh x CrhRs
outer product
max: 38%
mean: 2%
diagonal
max: 13%
mean: 1%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



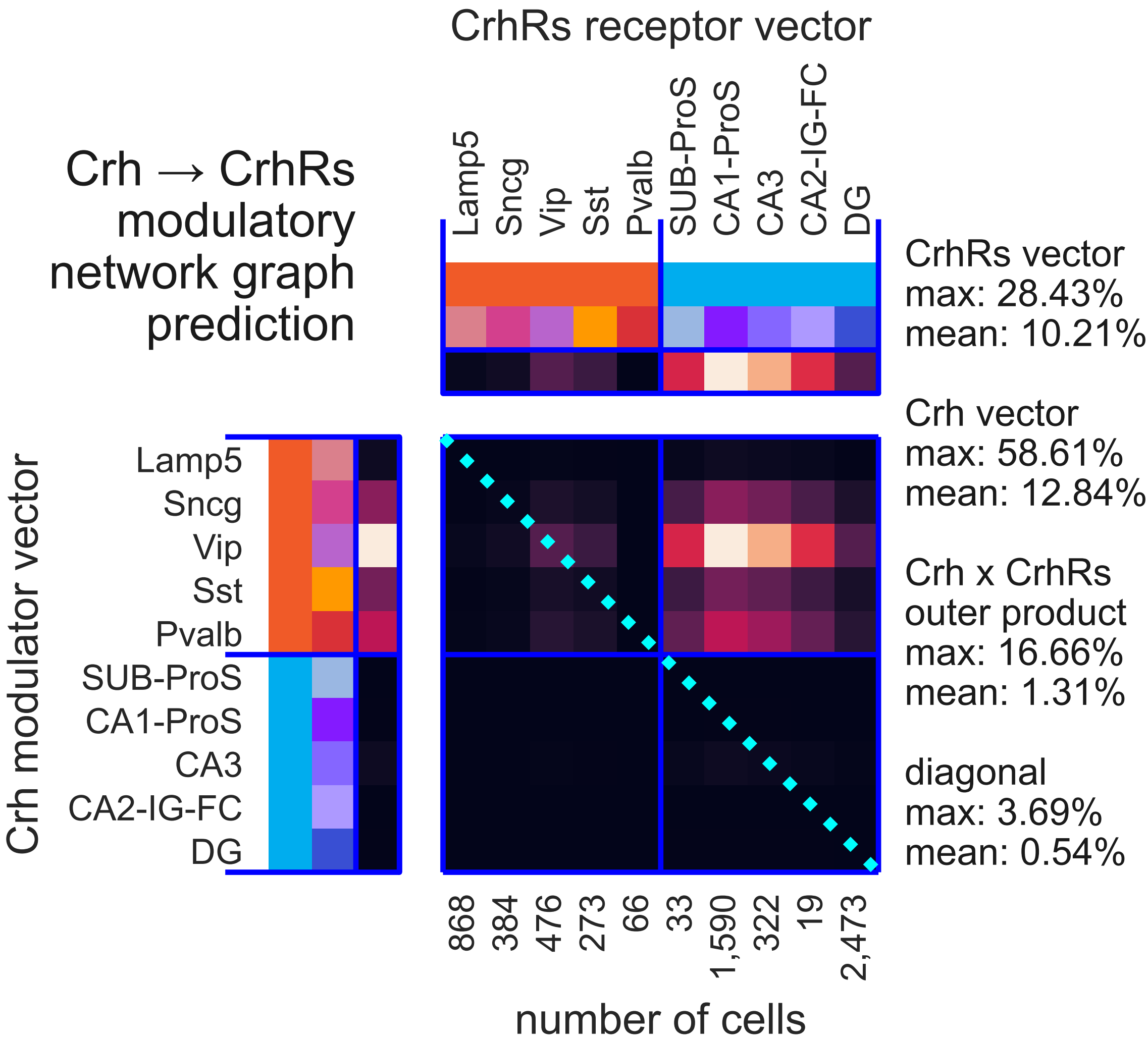
CrhRs vector
max: 42.86%
mean: 11.60%

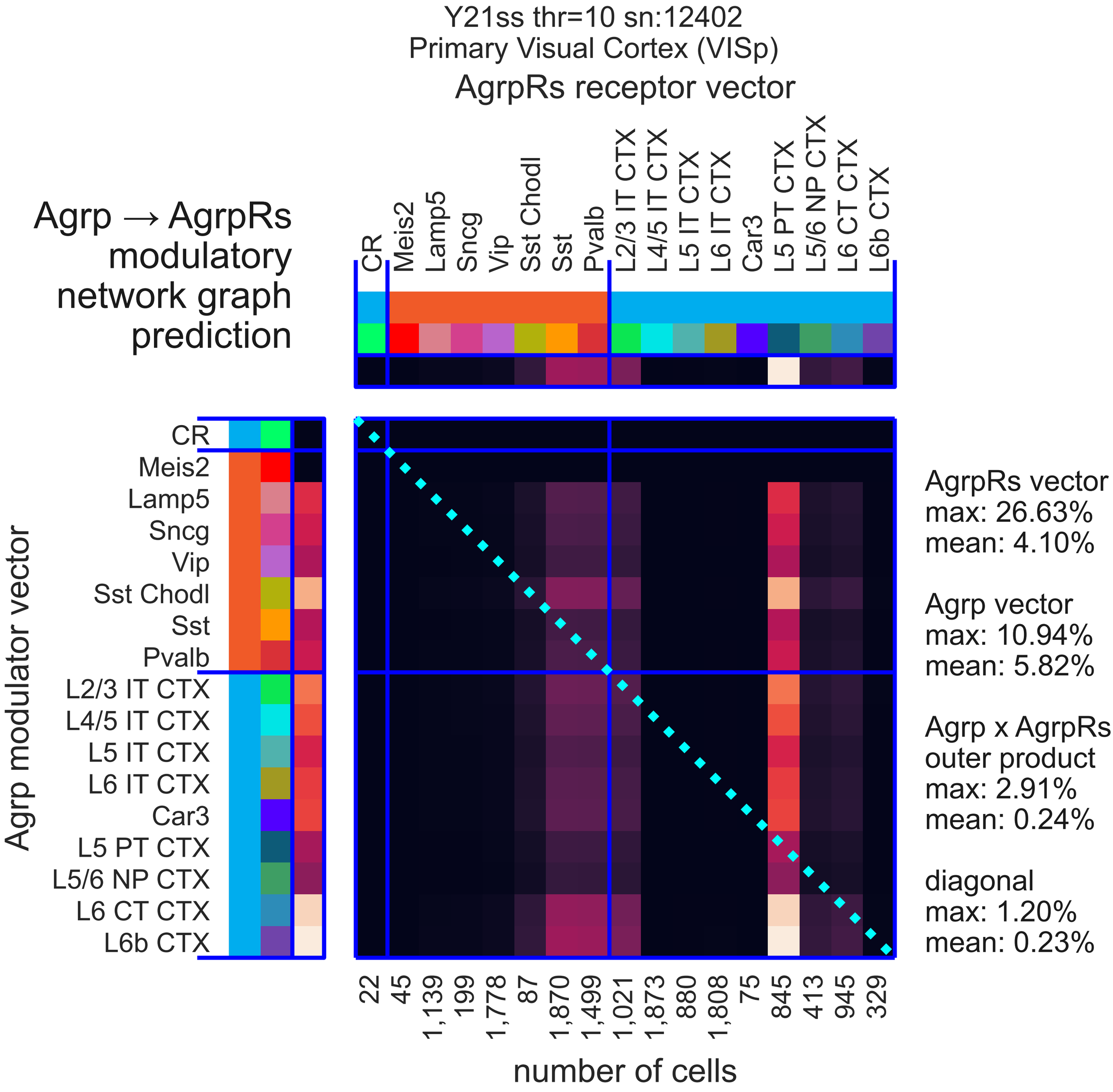
Crh vector
max: 26.17%
mean: 6.92%

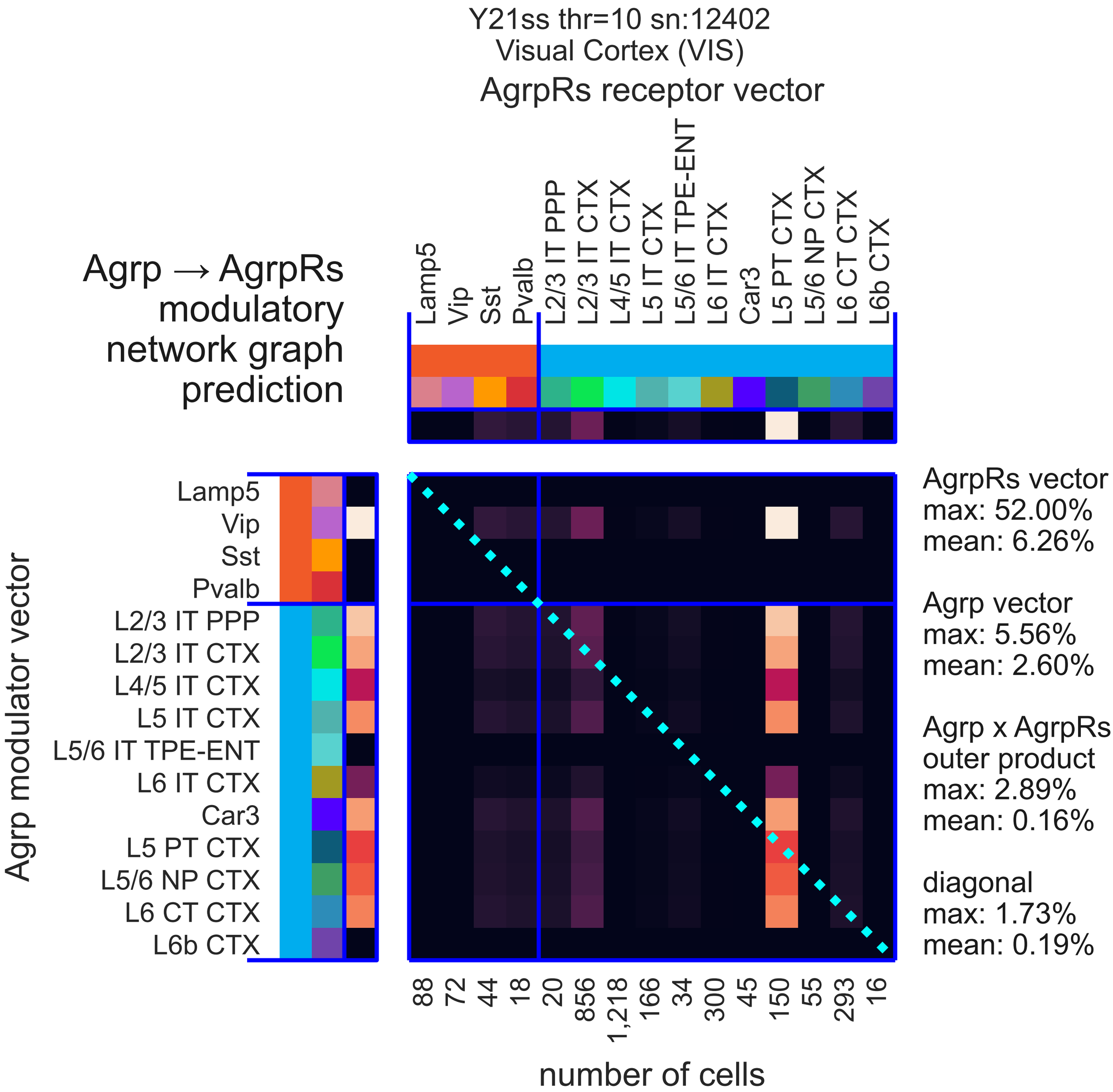
Crh x CrhRs
outer product
max: 11.21%
mean: 0.80%

diagonal
max: 2.06%
mean: 0.30%

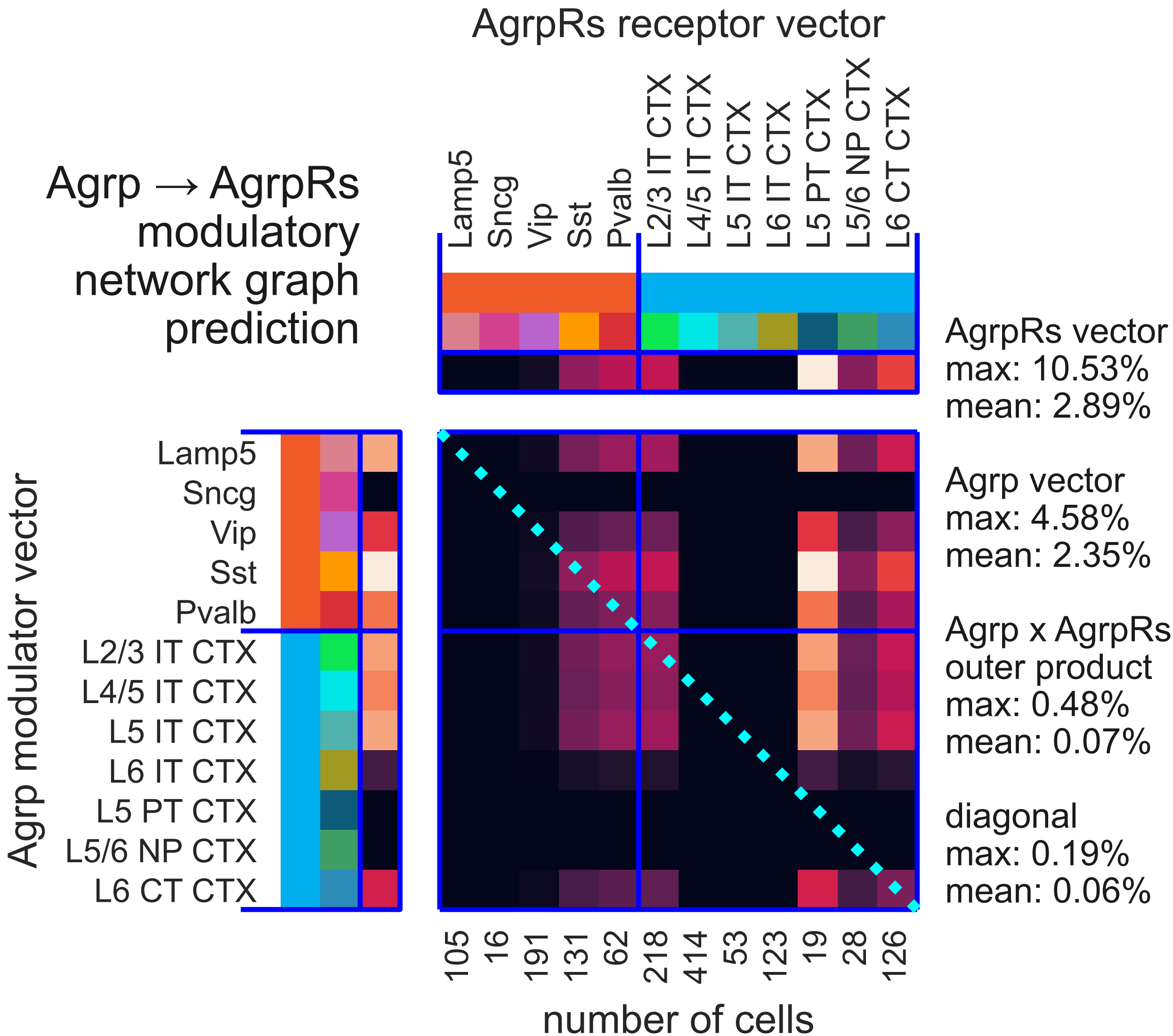
Y21ss thr=10 sn:12402
Hippocampus (HIP)



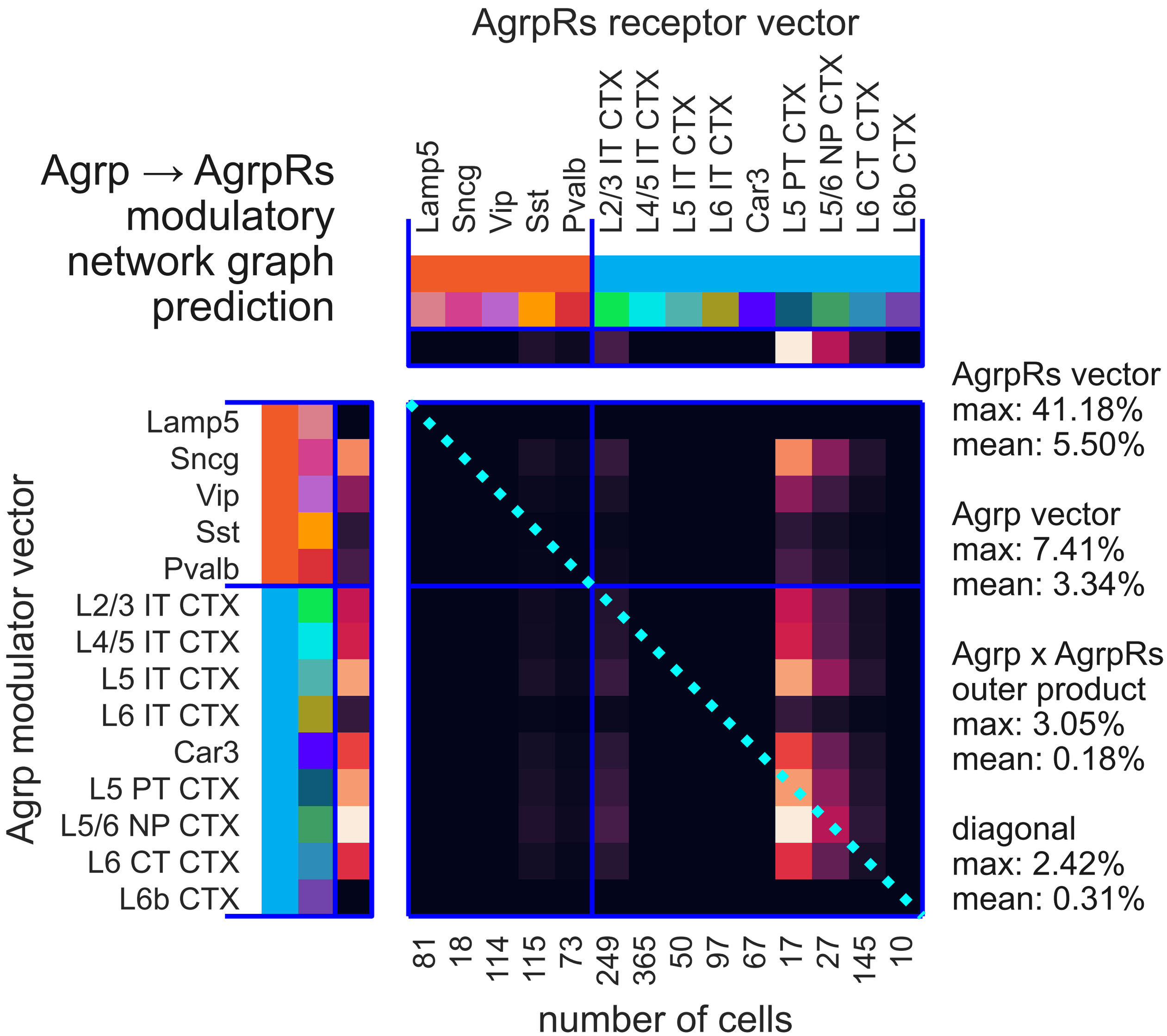

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
AgrpRs receptor vector
Agrp → AgrpRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Agrp modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
AgrpRs vector
max: 26.63%
mean: 4.10%
Agrp vector
max: 10.94%
mean: 5.82%
Agrp x AgrpRs
outer product
max: 2.91%
mean: 0.24%
diagonal
max: 1.20%
mean: 0.23%


Y21ss thr=10 sn:12402
Visual Cortex (VIS)
AgrpRs receptor vector
Agrp → AgrpRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Agrp modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
AgrpRs vector
max: 52.00%
mean: 6.26%
Agrp vector
max: 5.56%
mean: 2.60%
Agrp x AgrpRs
outer product
max: 2.89%
mean: 0.16%
diagonal
max: 1.73%
mean: 0.19%

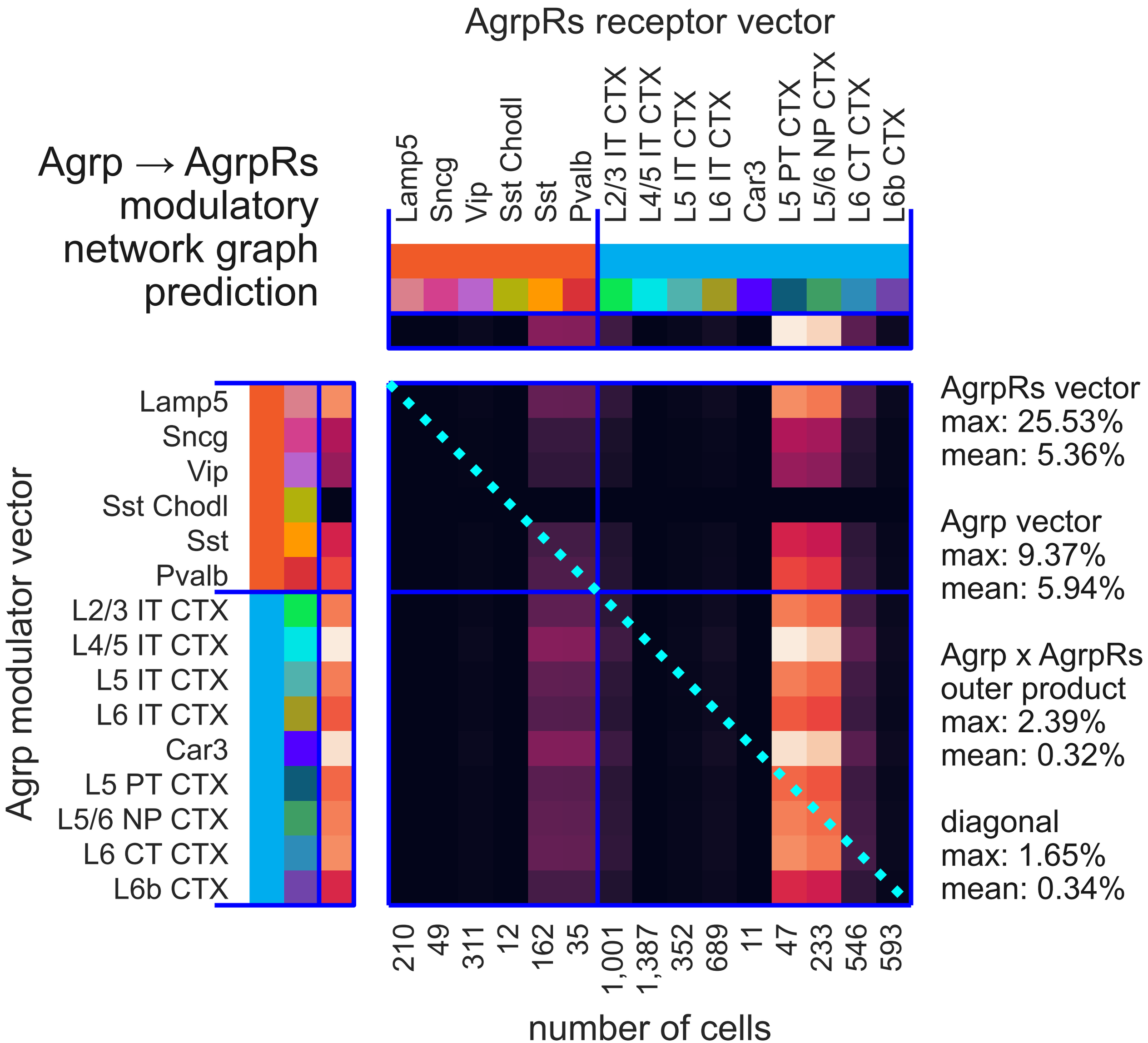
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



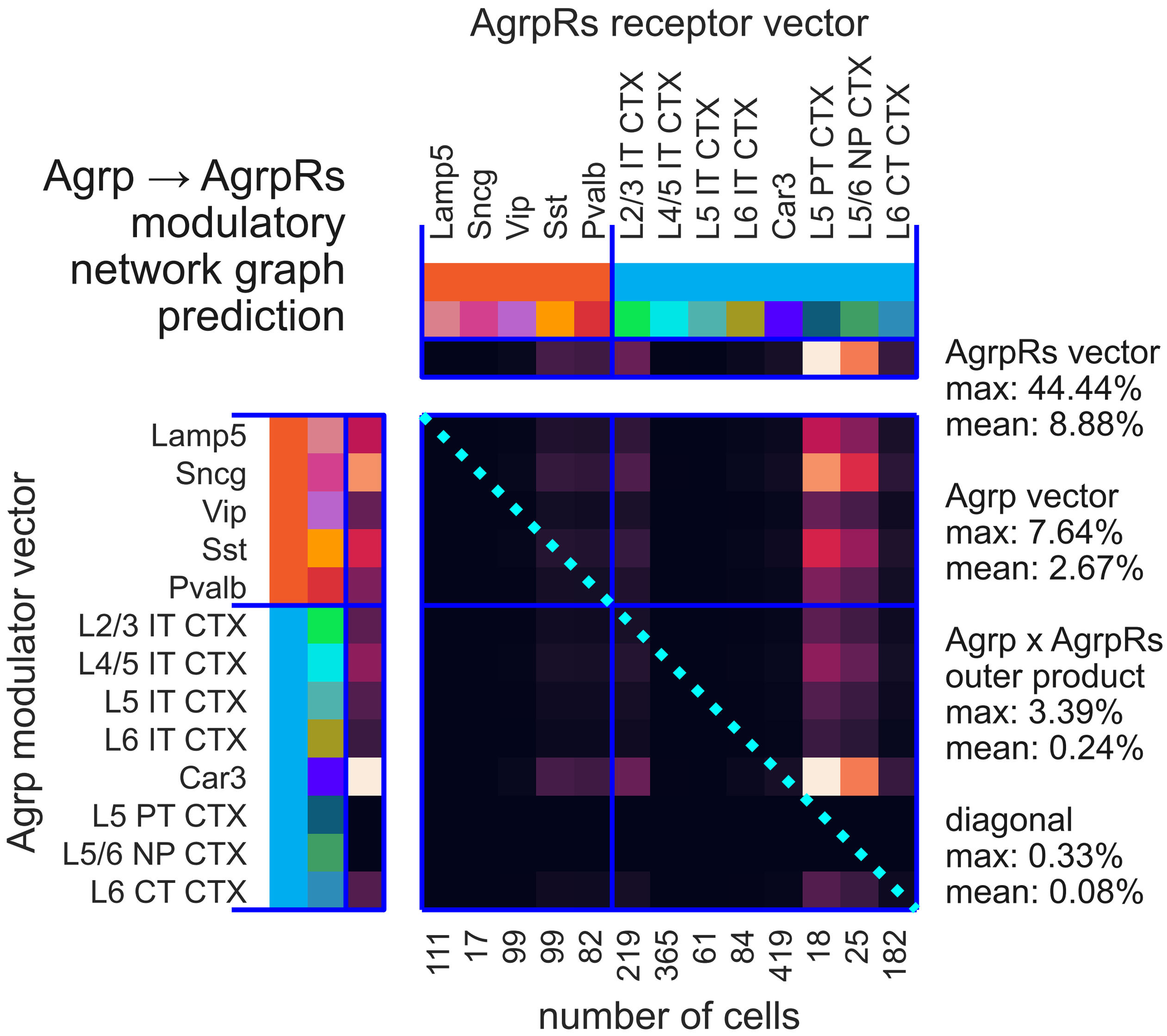
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)



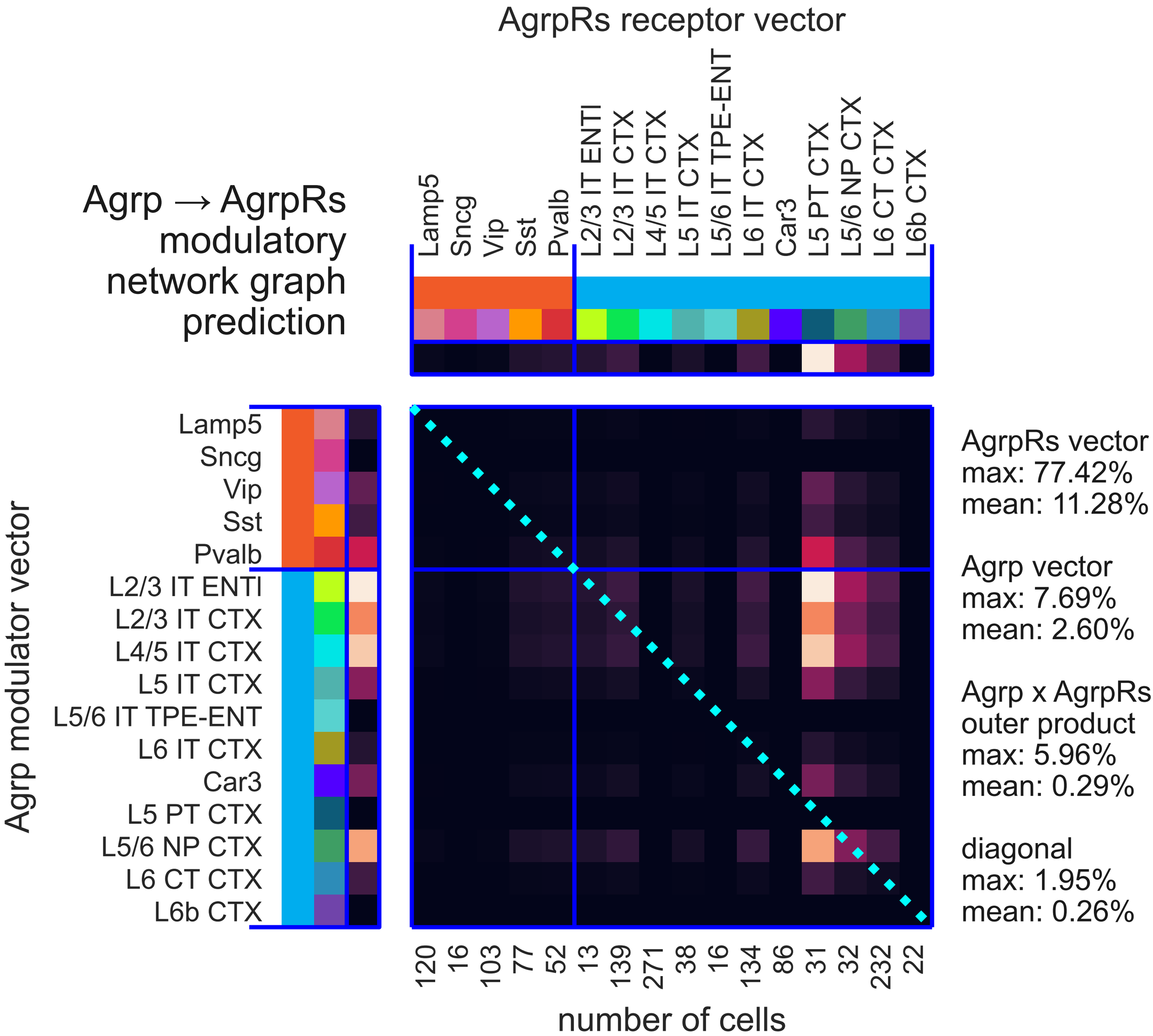
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

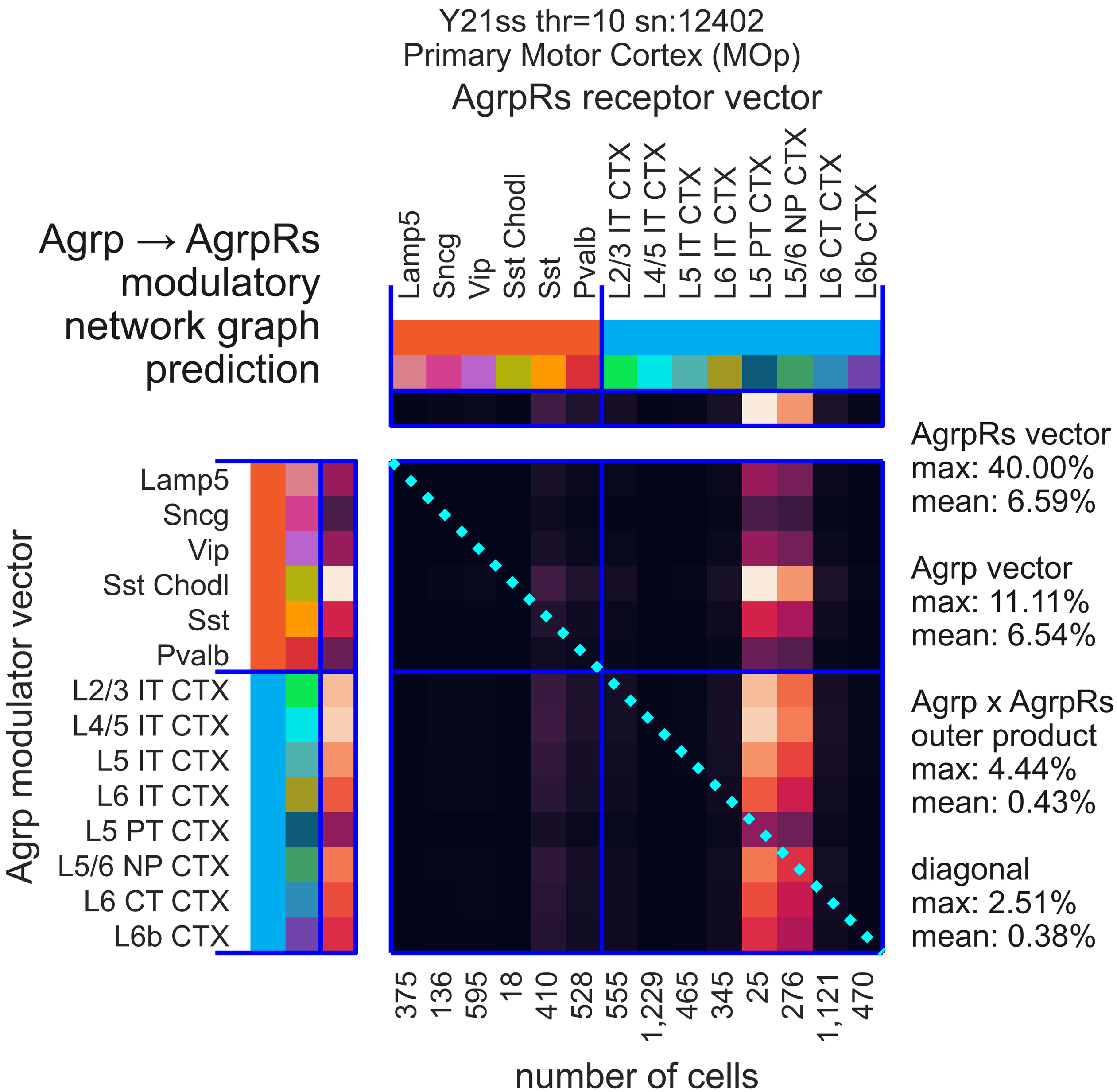


Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)

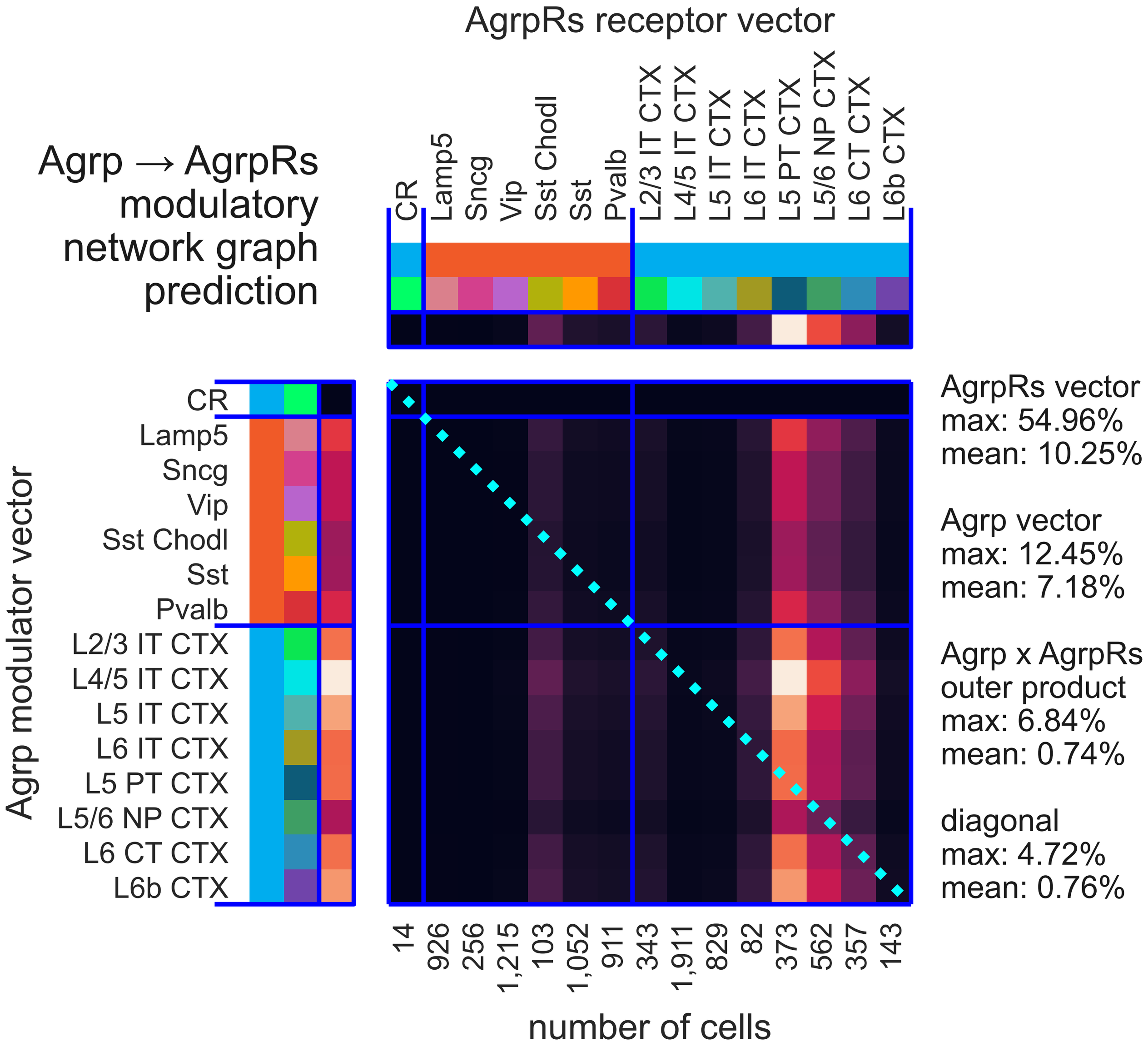


Y21ss thr=10 sn:12402
Gustatory Cortex (GU)

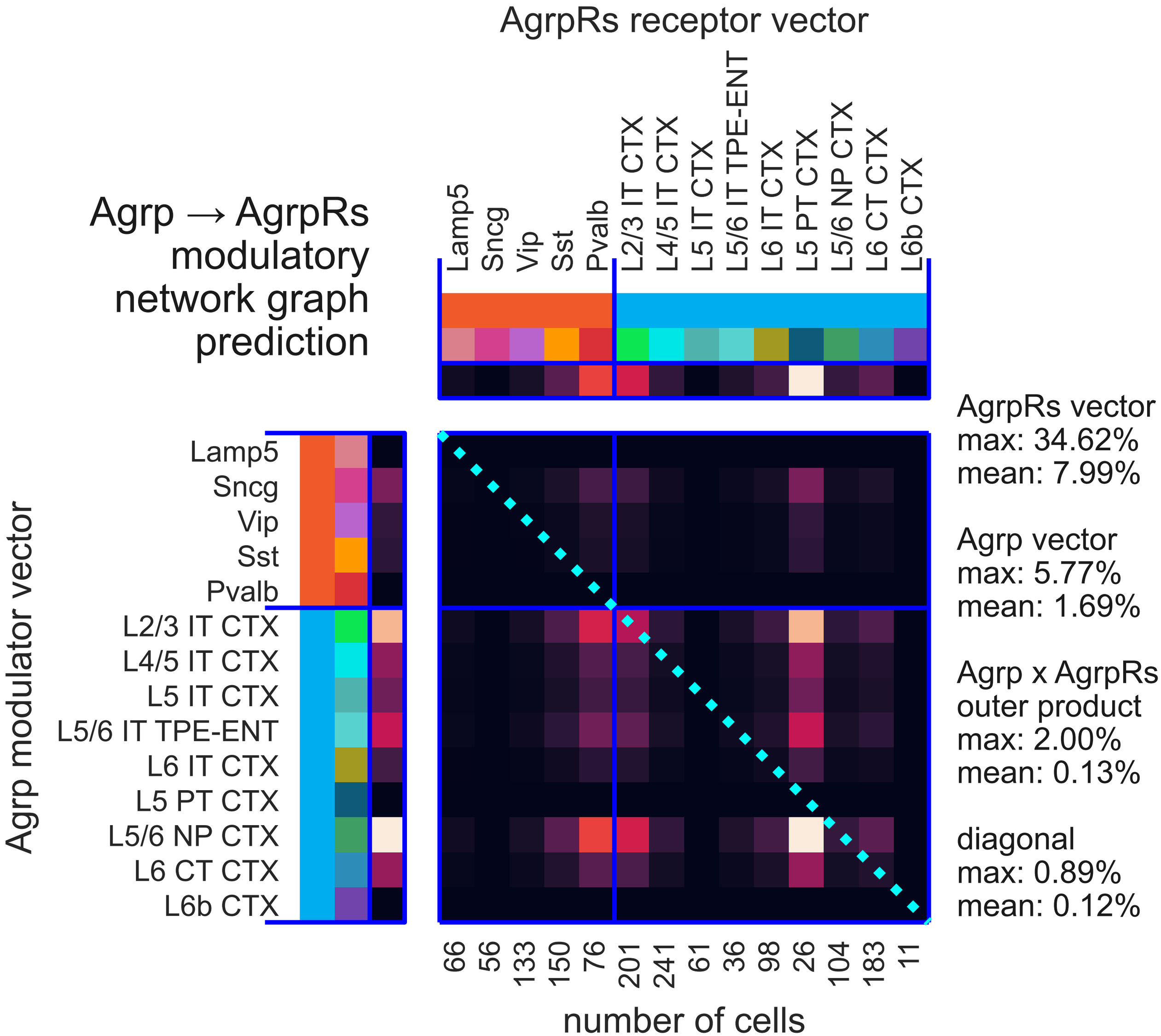



Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
AgrpRs receptor vector
Agrp → AgrpRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Agrp modulator vector
AgrpRs vector
max: 40.00%
mean: 6.59%
Agrp vector
max: 11.11%
mean: 6.54%
Agrp x AgrpRs
outer product
max: 4.44%
mean: 0.43%
diagonal
max: 2.51%
mean: 0.38%
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



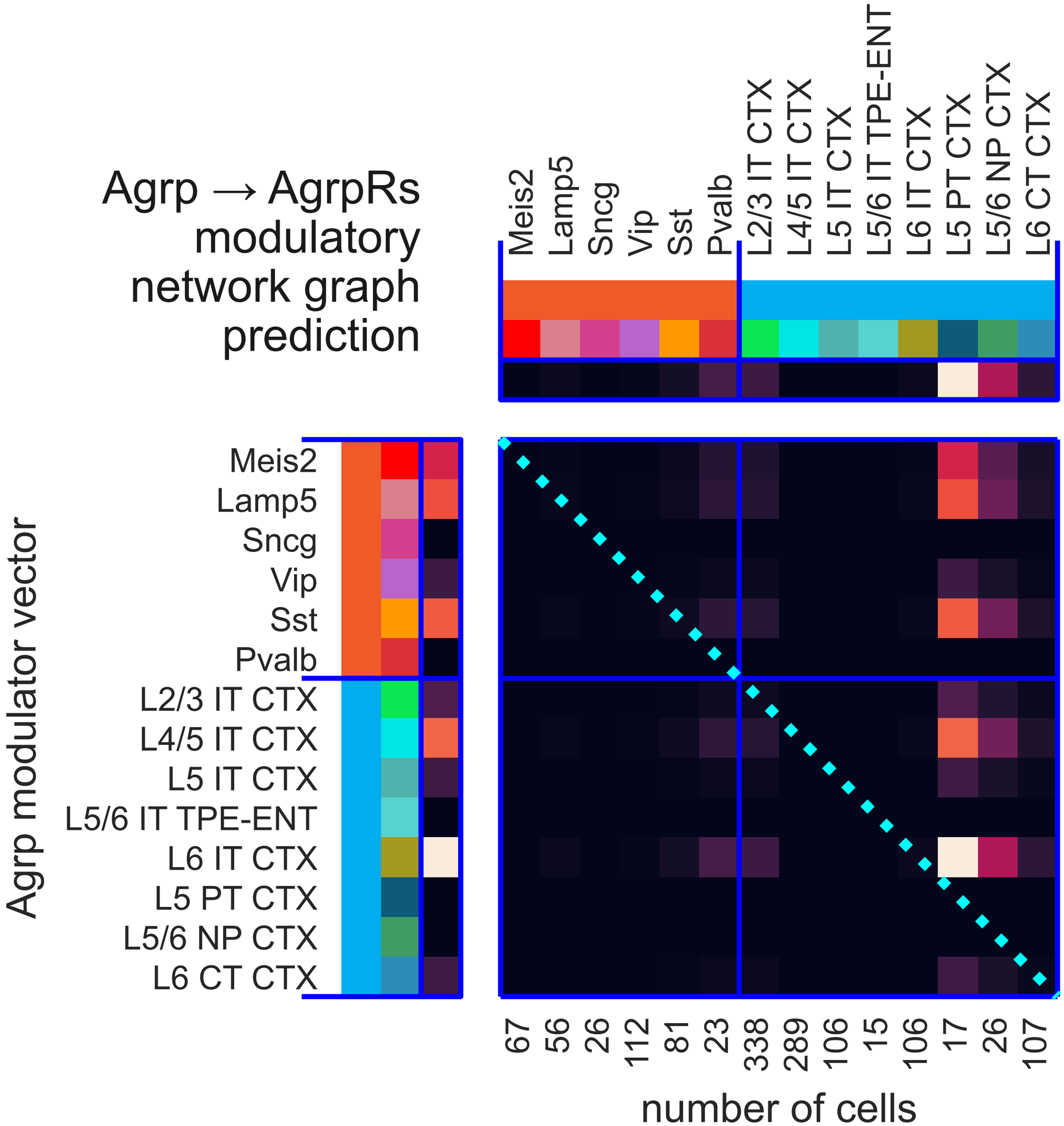
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)



Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

AgrpRs receptor vector

Agrp → AgrpRs
modulatory
network graph
prediction



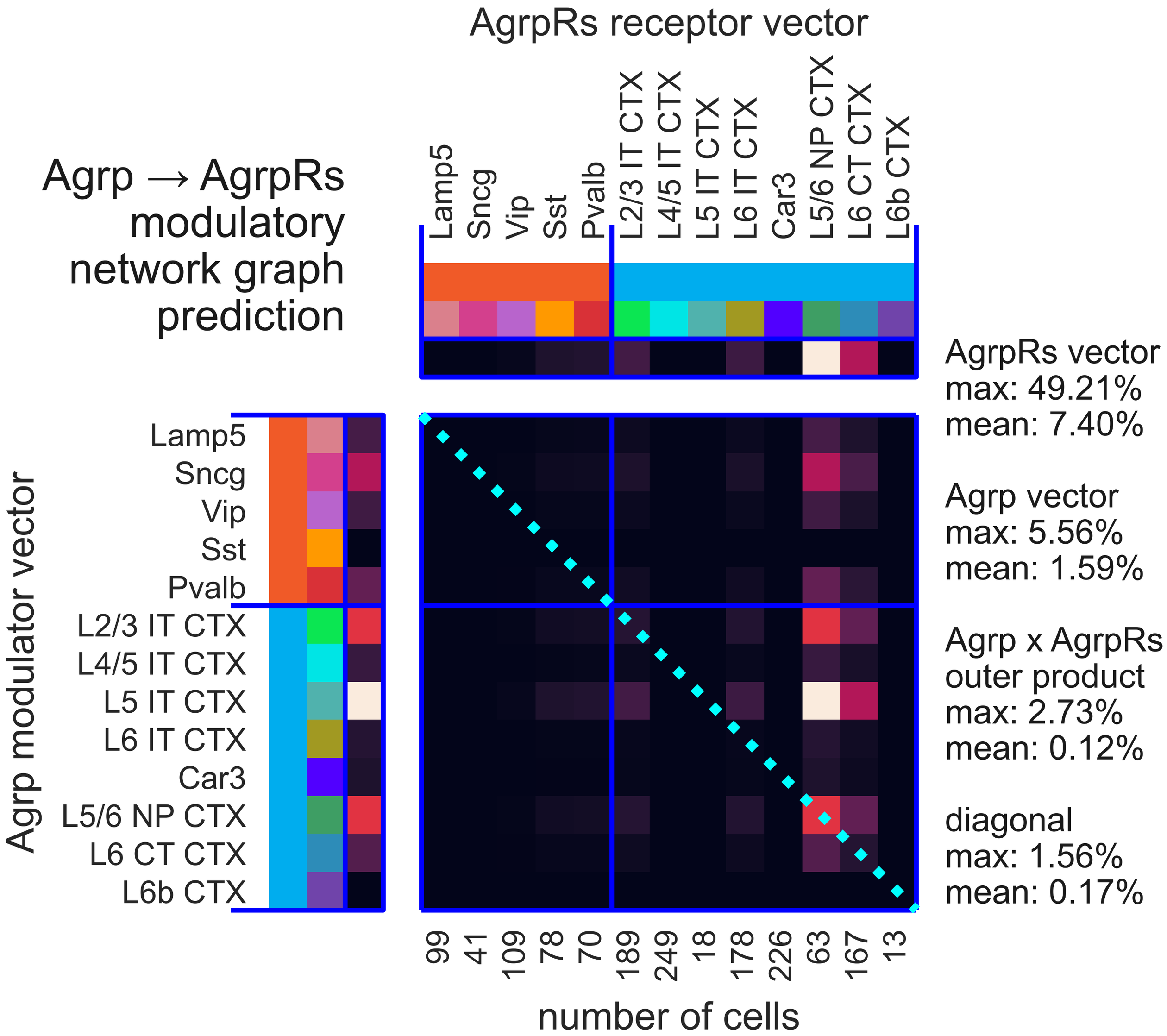
AgrpRs vector
max: 70.59%
mean: 10.17%

Agrp vector
max: 5.66%
mean: 1.69%

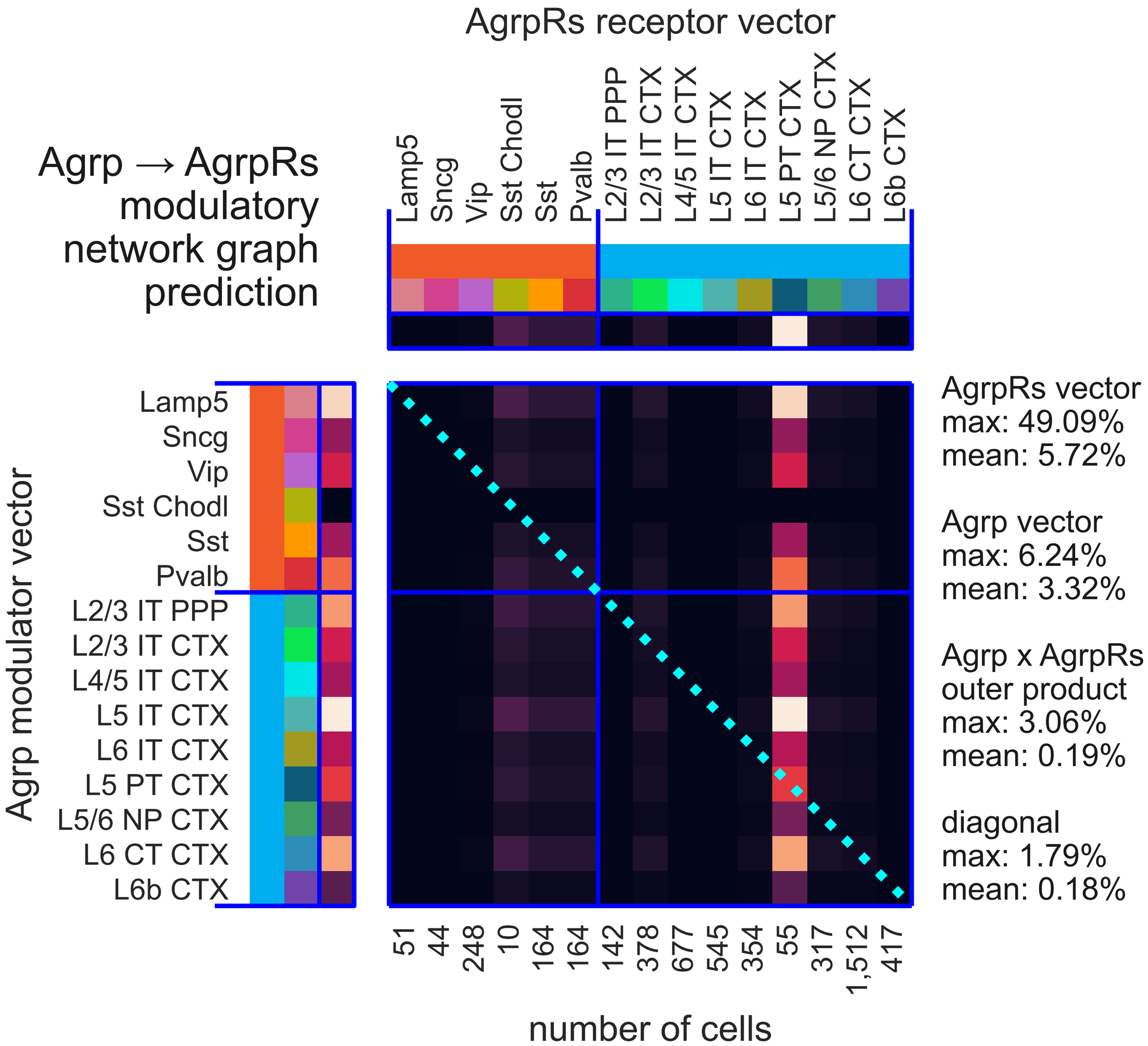
Agrp x AgrpRs
outer product
max: 4.00%
mean: 0.17%

diagonal
max: 0.14%
mean: 0.04%

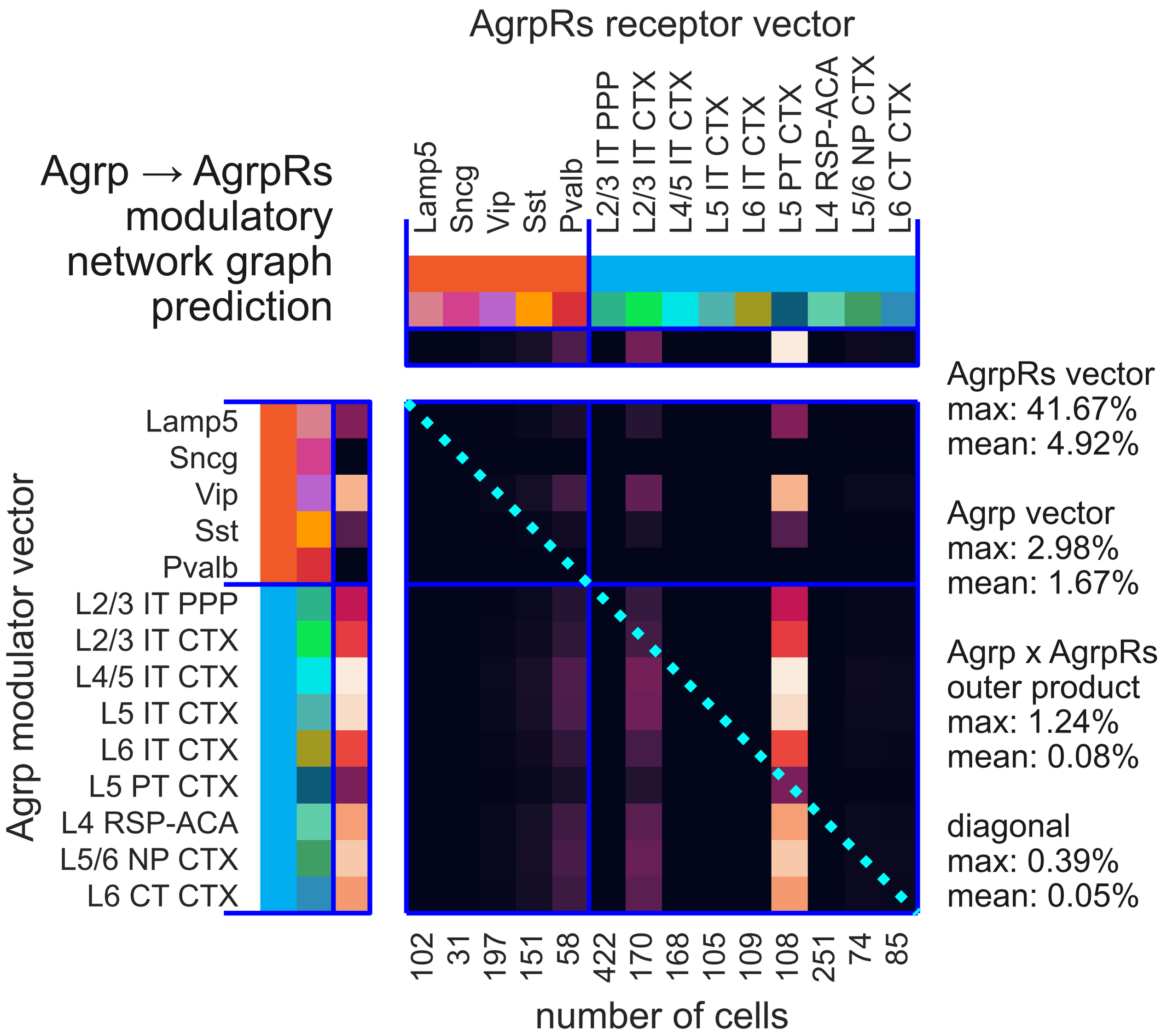
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



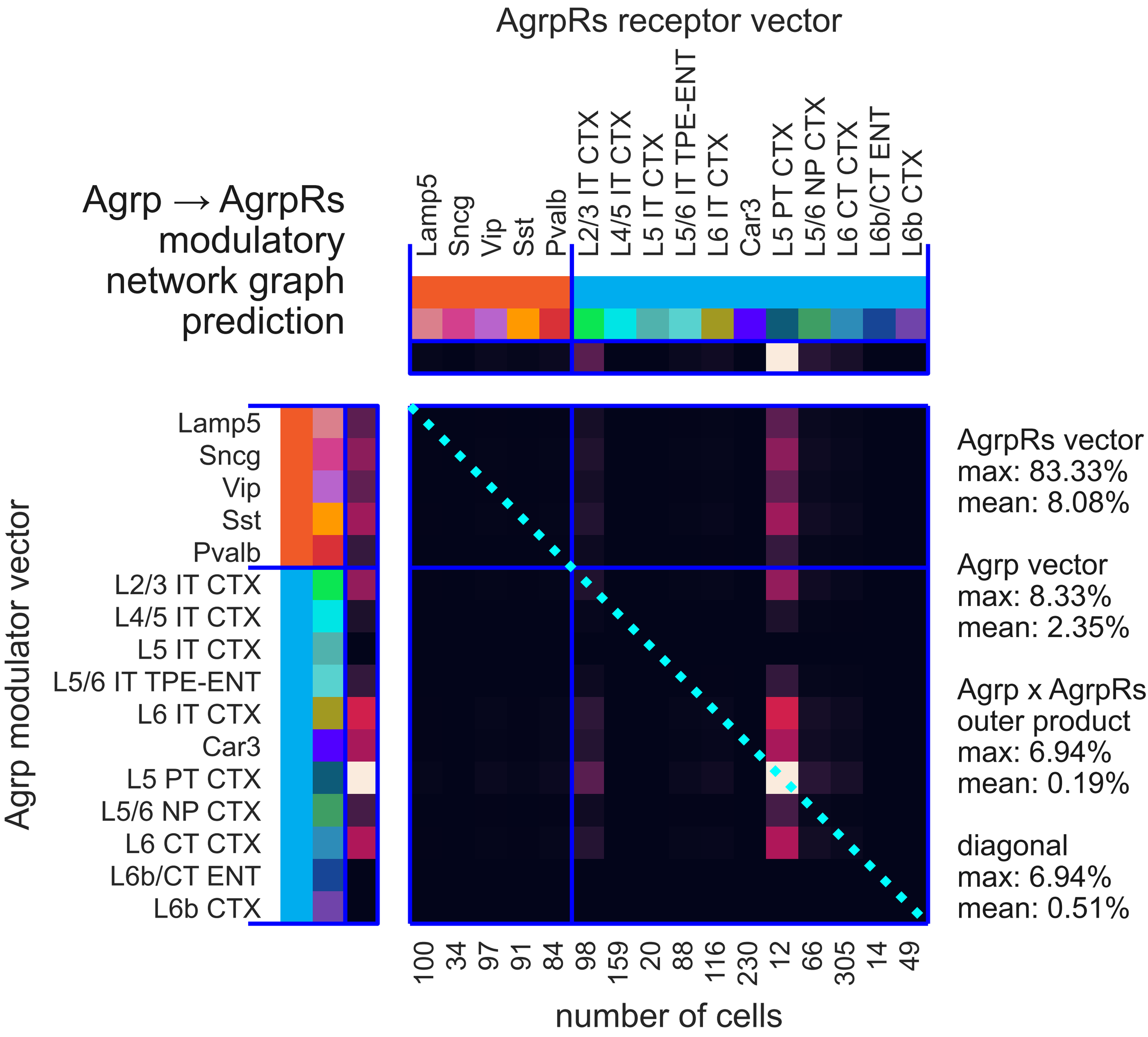
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)



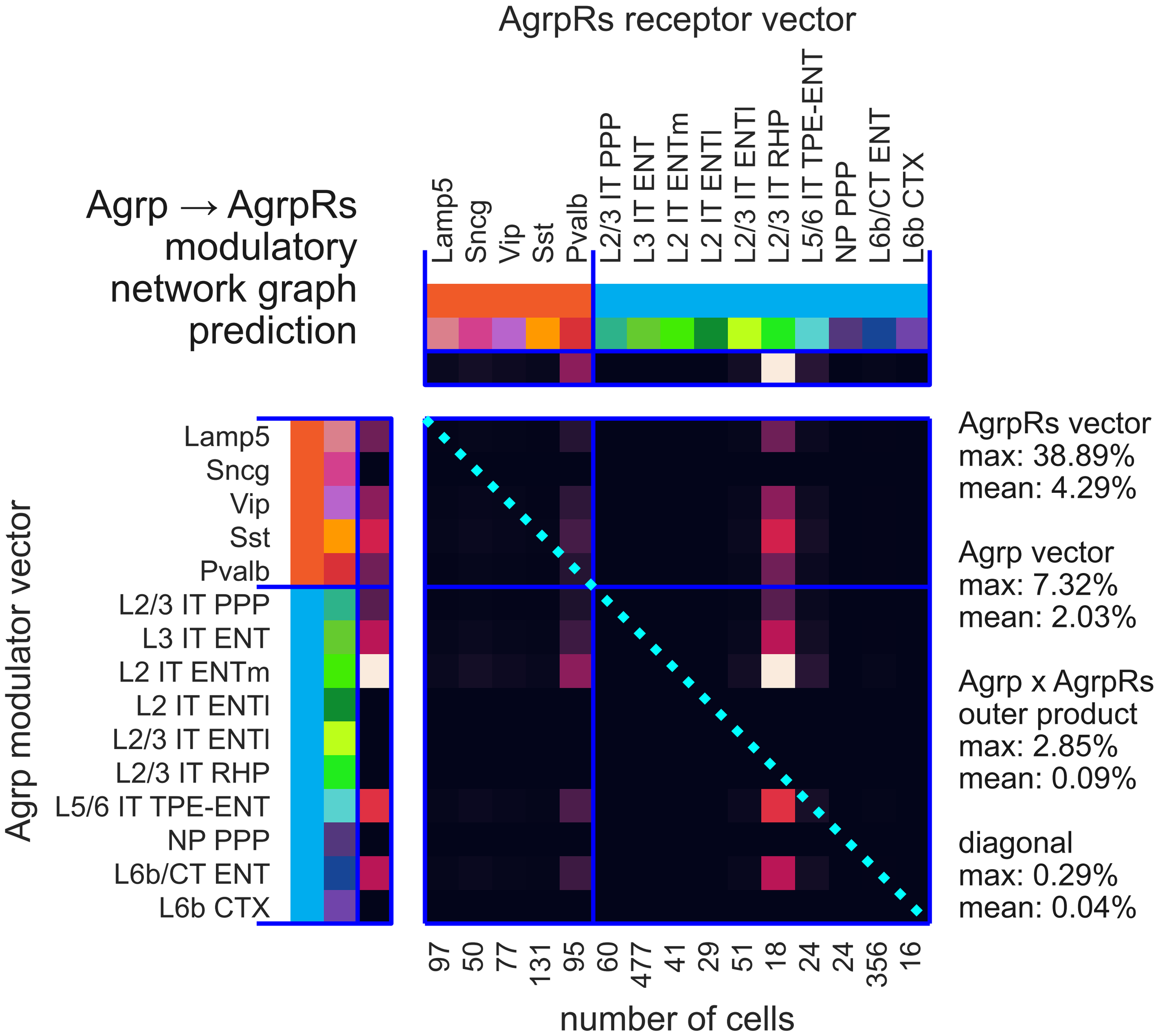
Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)

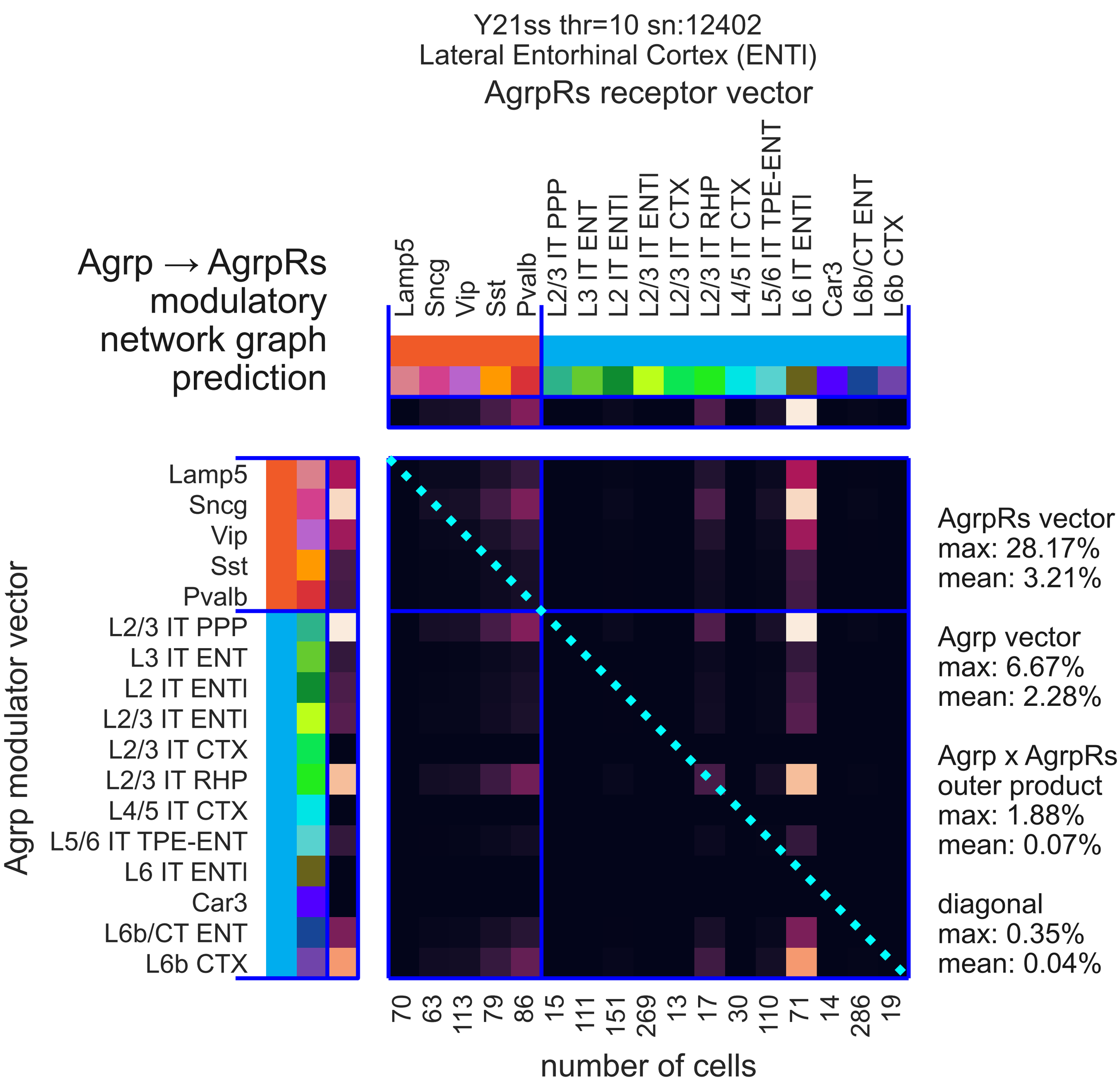


Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

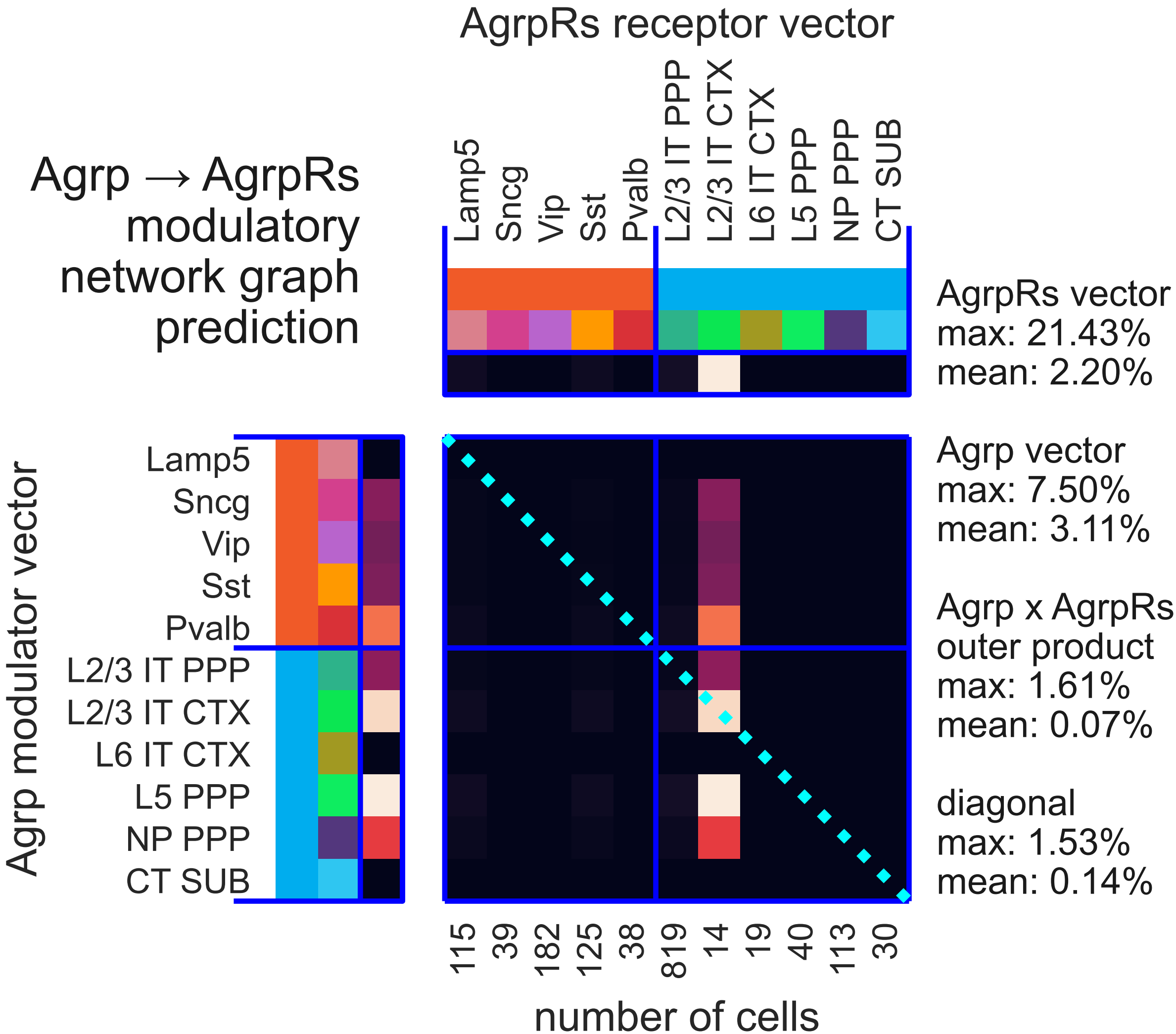


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

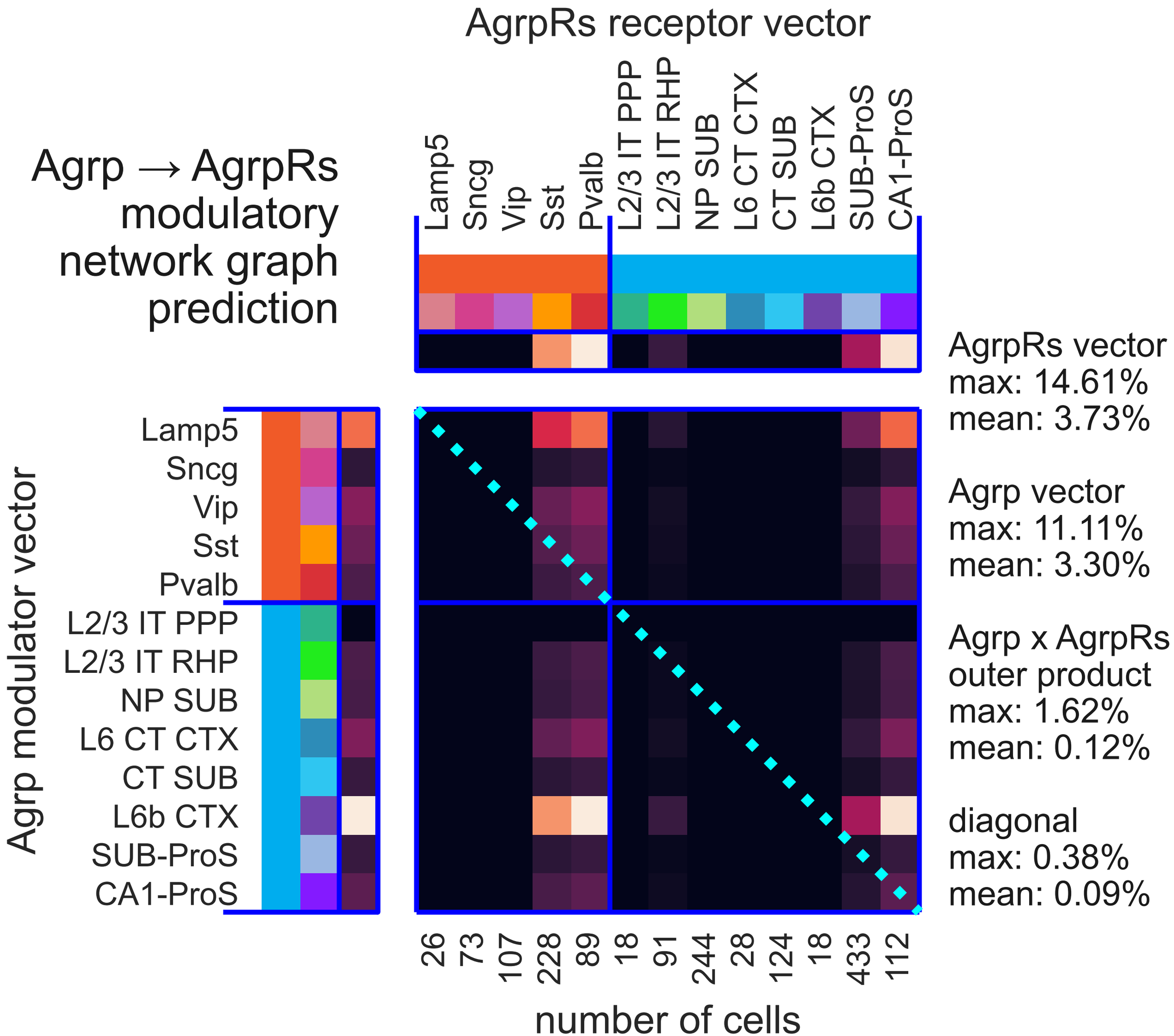



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
AgrpRs receptor vector
Agrp → AgrpRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Agrp modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
AgrpRs vector
max: 28.17%
mean: 3.21%
Agrp vector
max: 6.67%
mean: 2.28%
Agrp x AgrpRs
outer product
max: 1.88%
mean: 0.07%
diagonal
max: 0.35%
mean: 0.04%

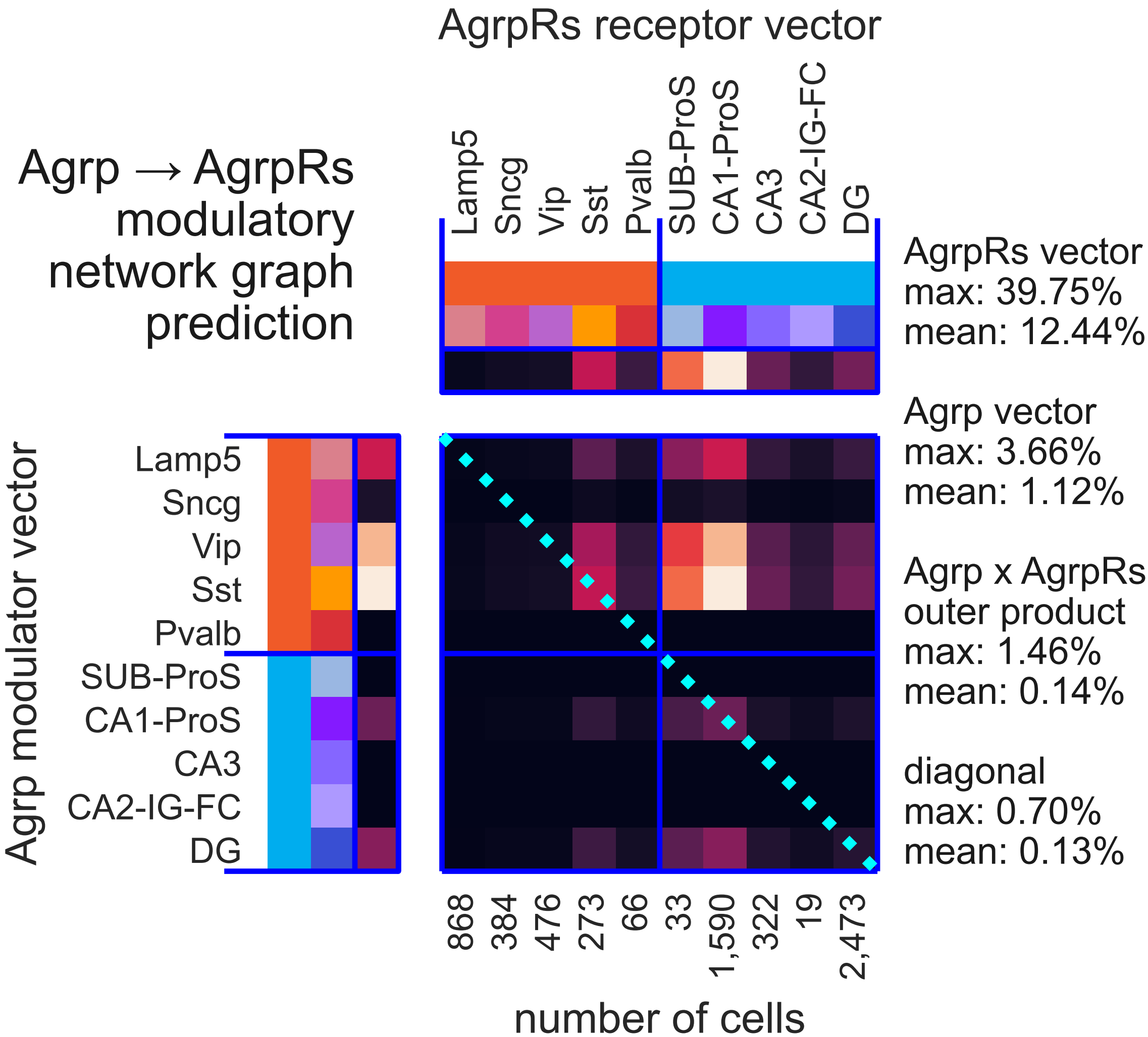
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

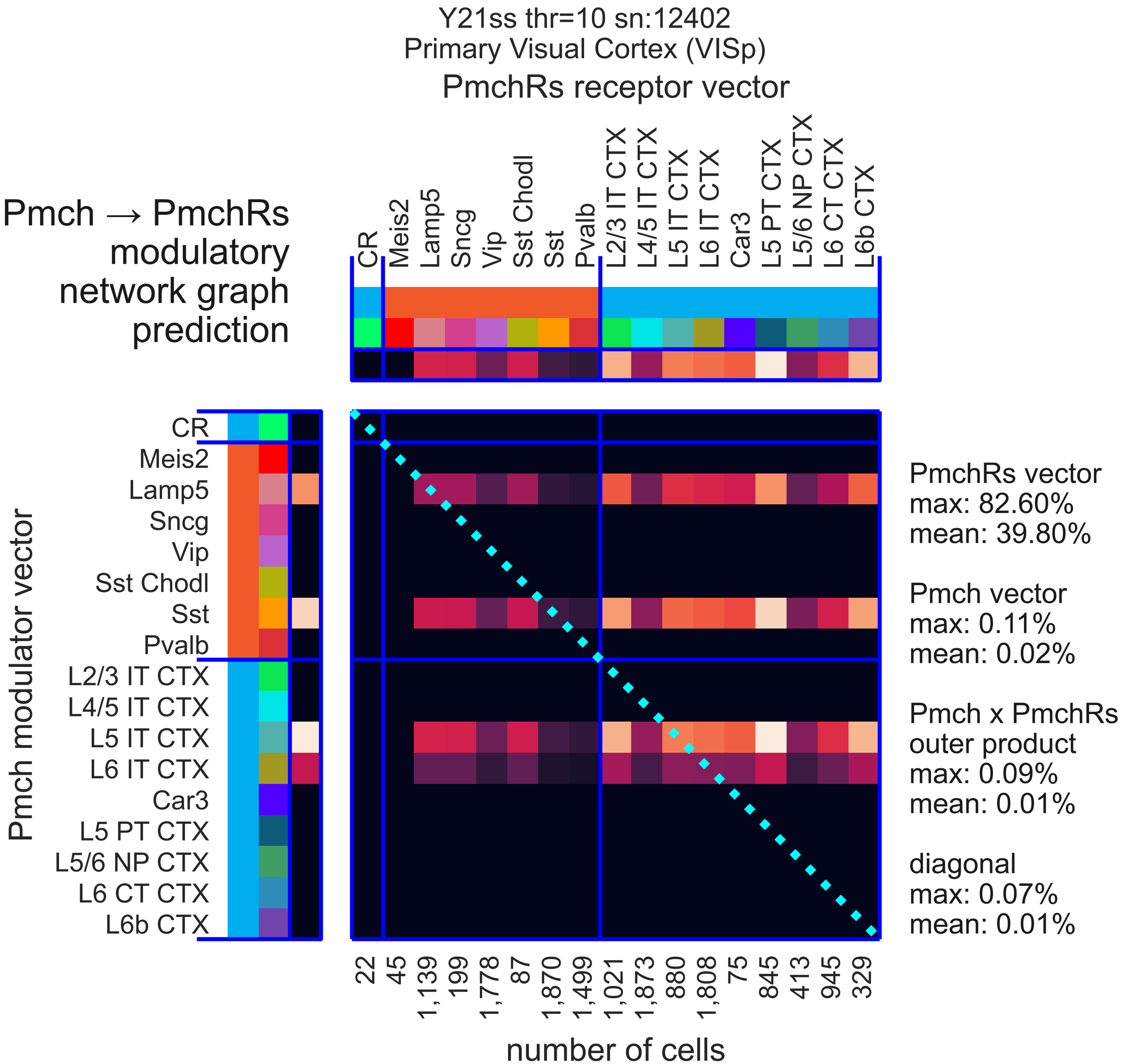


Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



Y21ss thr=10 sn:12402
Hippocampus (HIP)

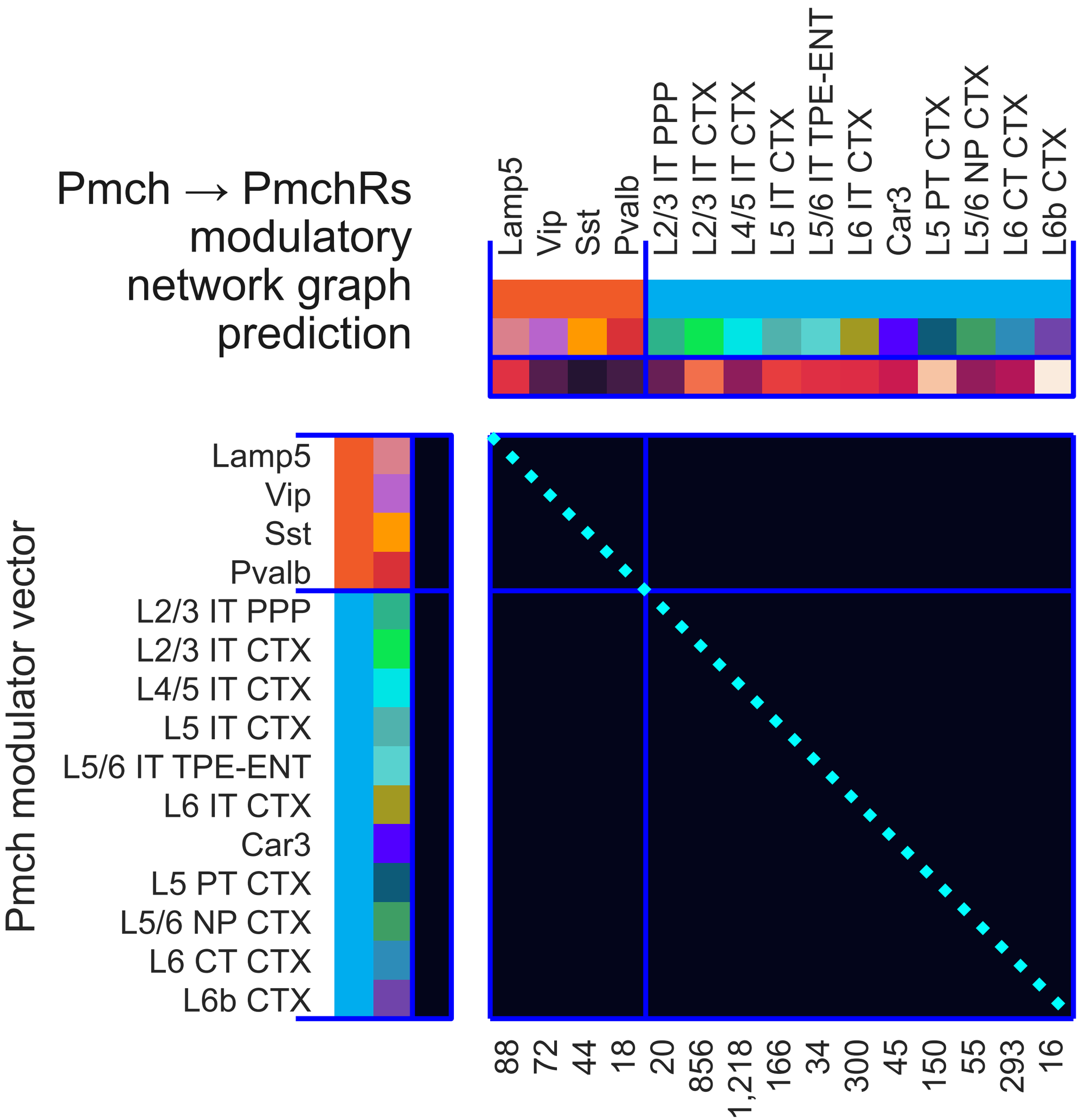



Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
PmchRs receptor vector
Pmch → PmchRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Pmch modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
PmchRs vector
max: 82.60%
mean: 39.80%
Pmch vector
max: 0.11%
mean: 0.02%
Pmch x PmchRs
outer product
max: 0.09%
mean: 0.01%
diagonal
max: 0.07%
mean: 0.01%

Y21ss thr=10 sn:12402
Visual Cortex (VIS)

PmchRs receptor vector

Pmch → PmchRs
modulatory
network graph
prediction



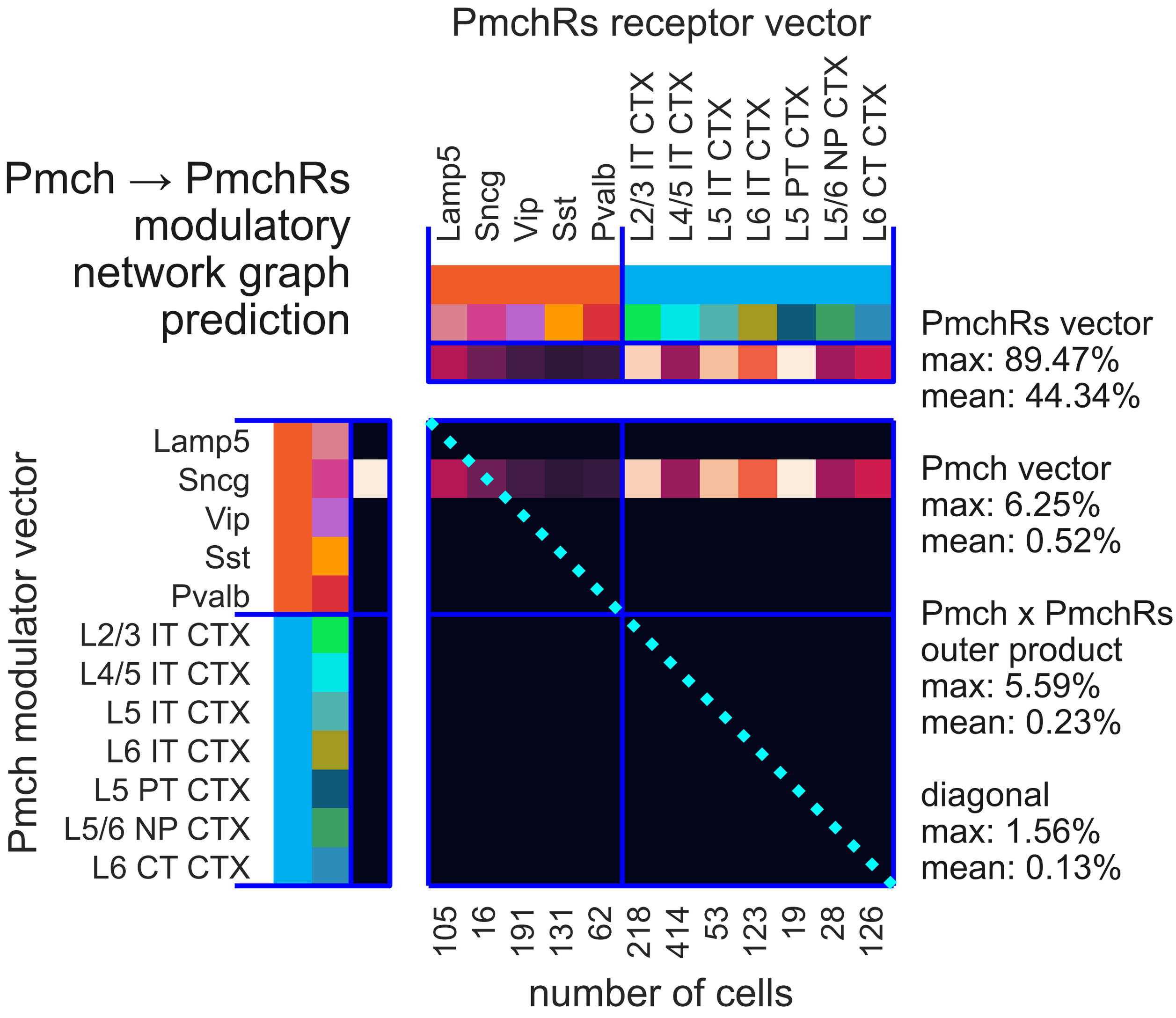
PmchRs vector
max: 93.75%
mean: 45.72%

Pmch vector
max: 0.00%
mean: 0.00%

Pmch x PmchRs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

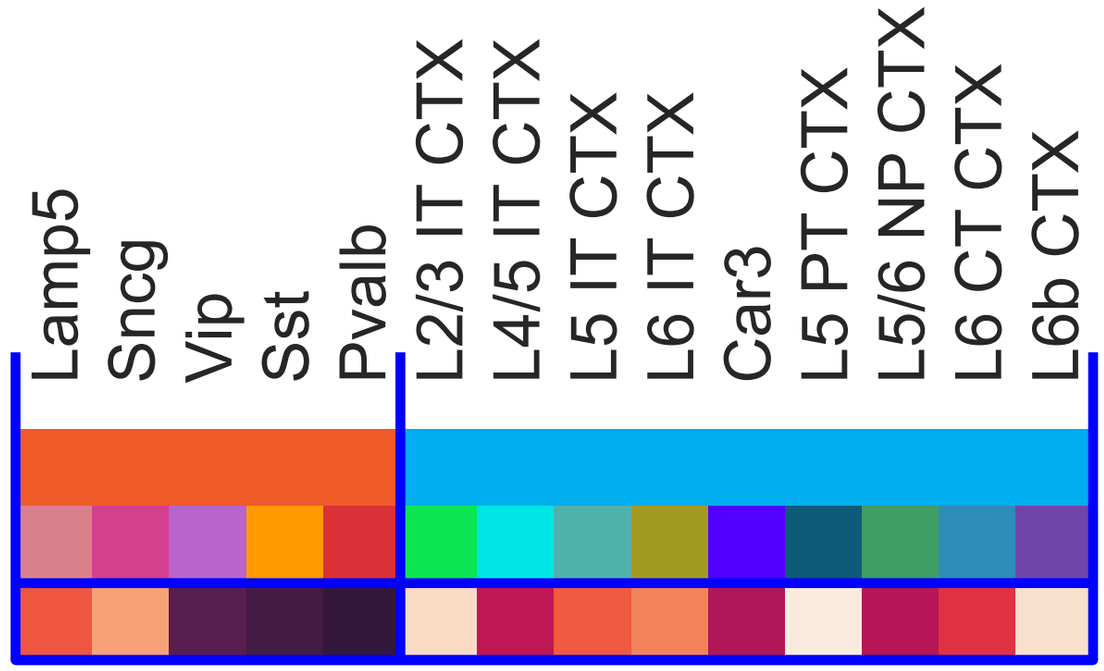
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)

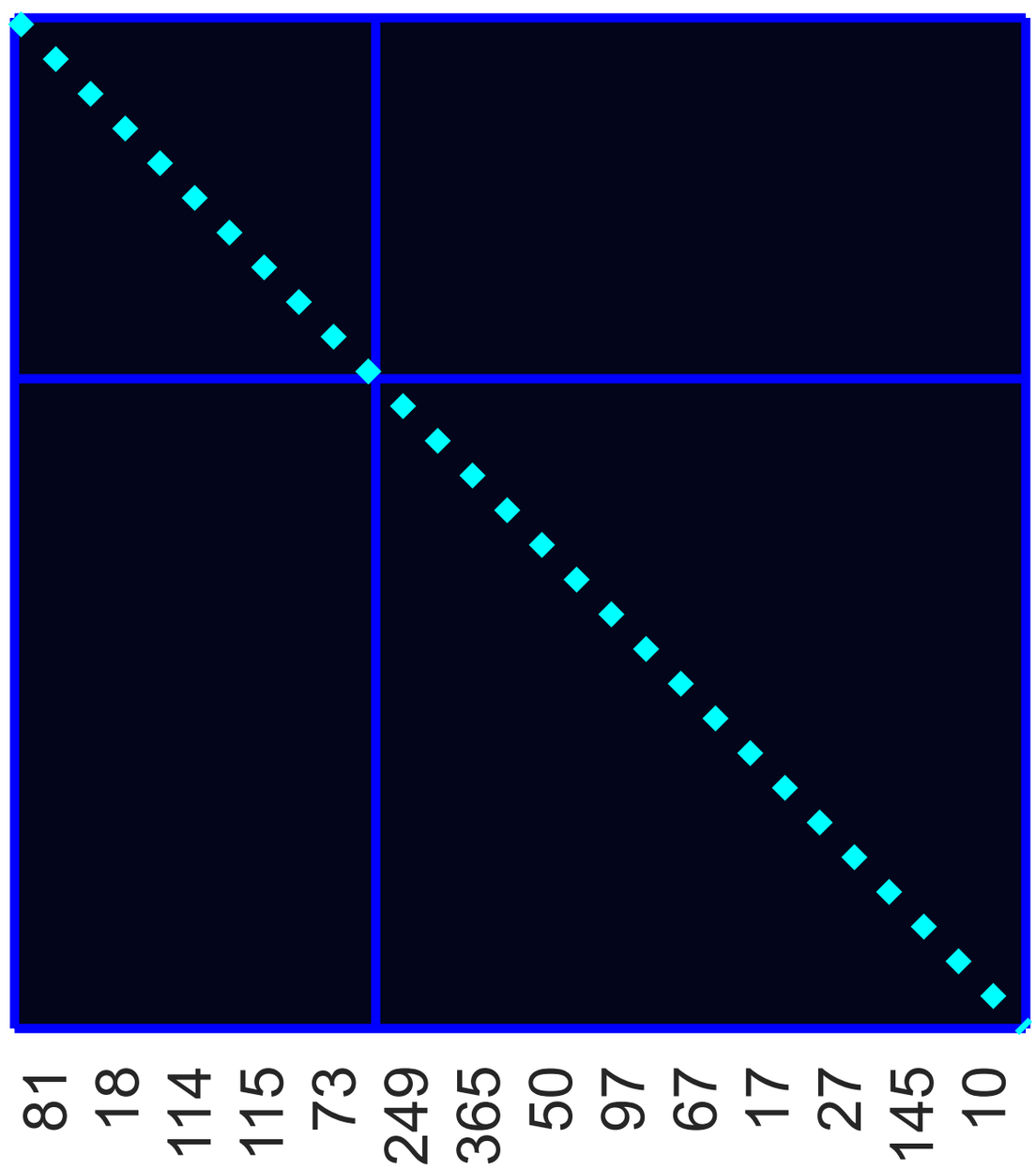


Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

PmchRs receptor vector

Pmch → PmchRs
modulatory
network graph
prediction





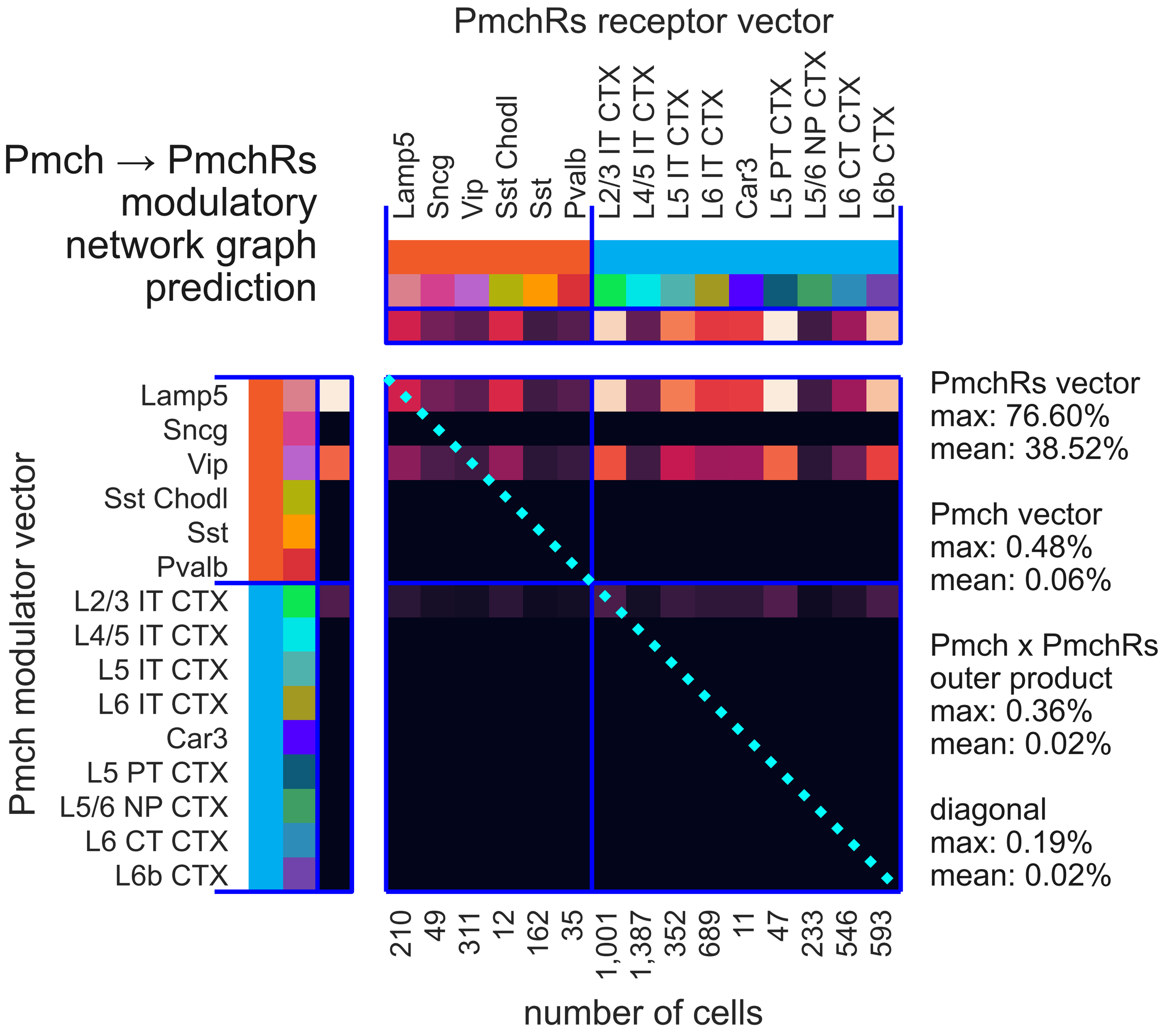
PmchRs vector
max: 82.35%
mean: 48.51%

Pmch vector
max: 0.00%
mean: 0.00%

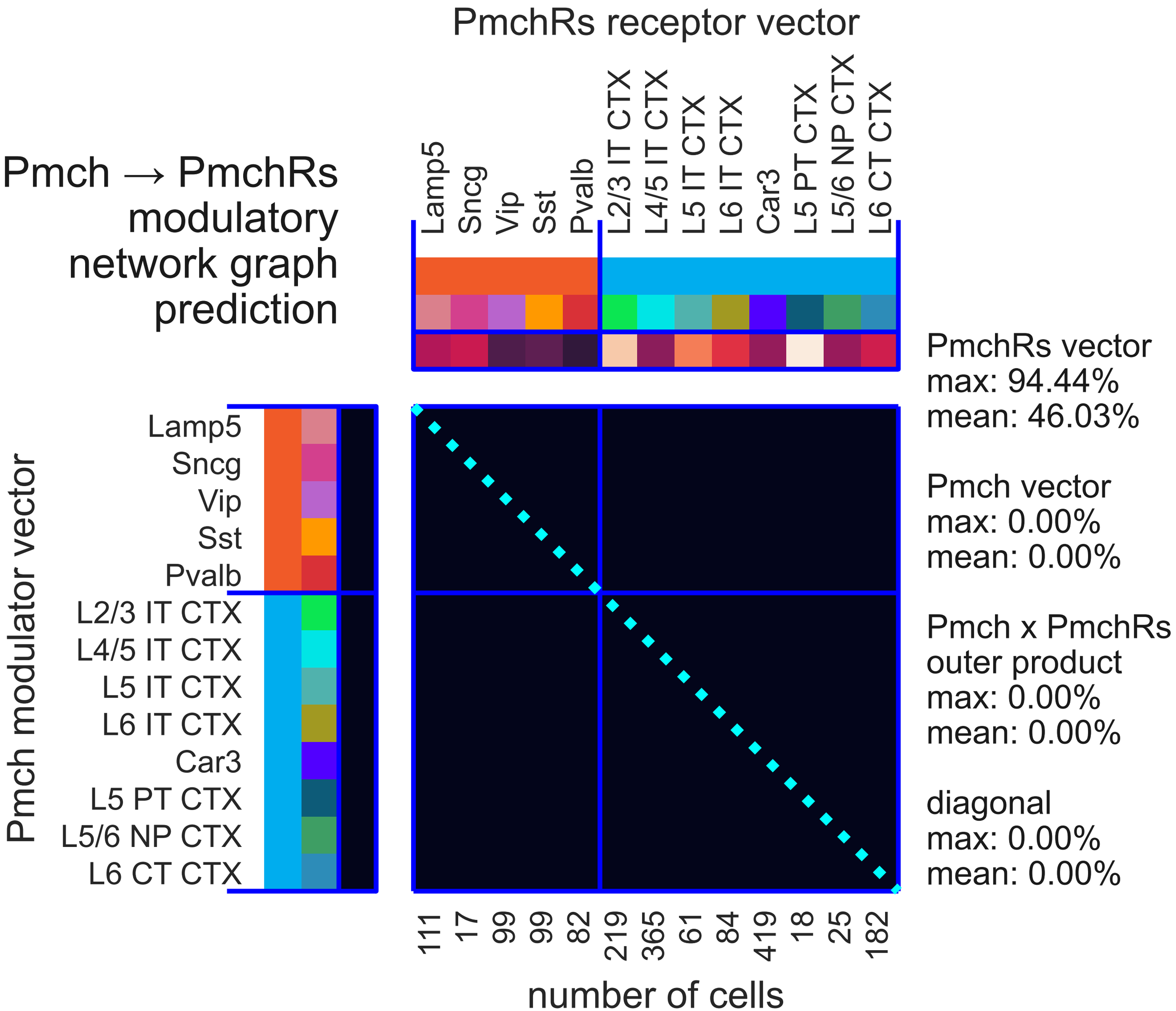
Pmch x PmchRs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

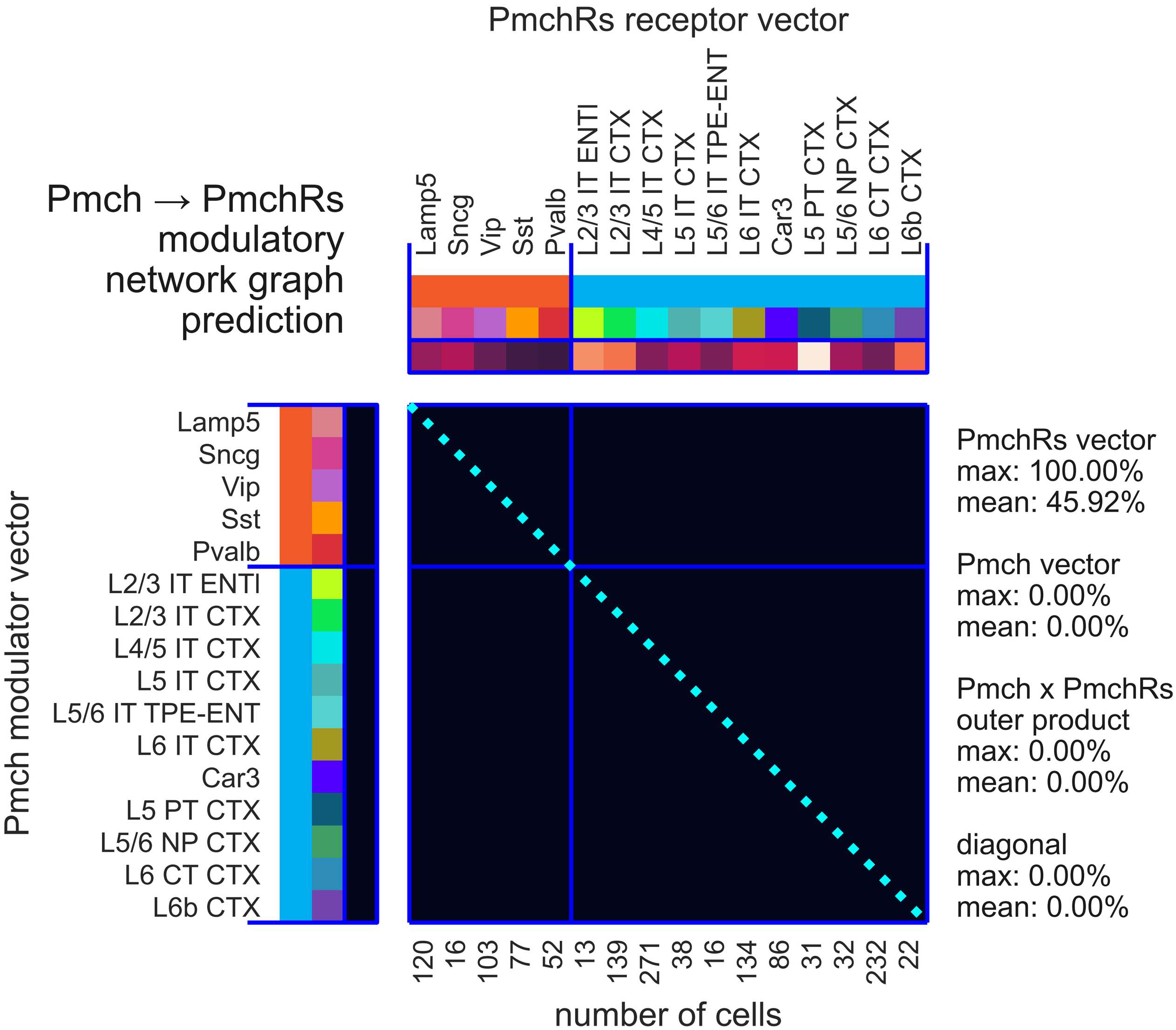
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



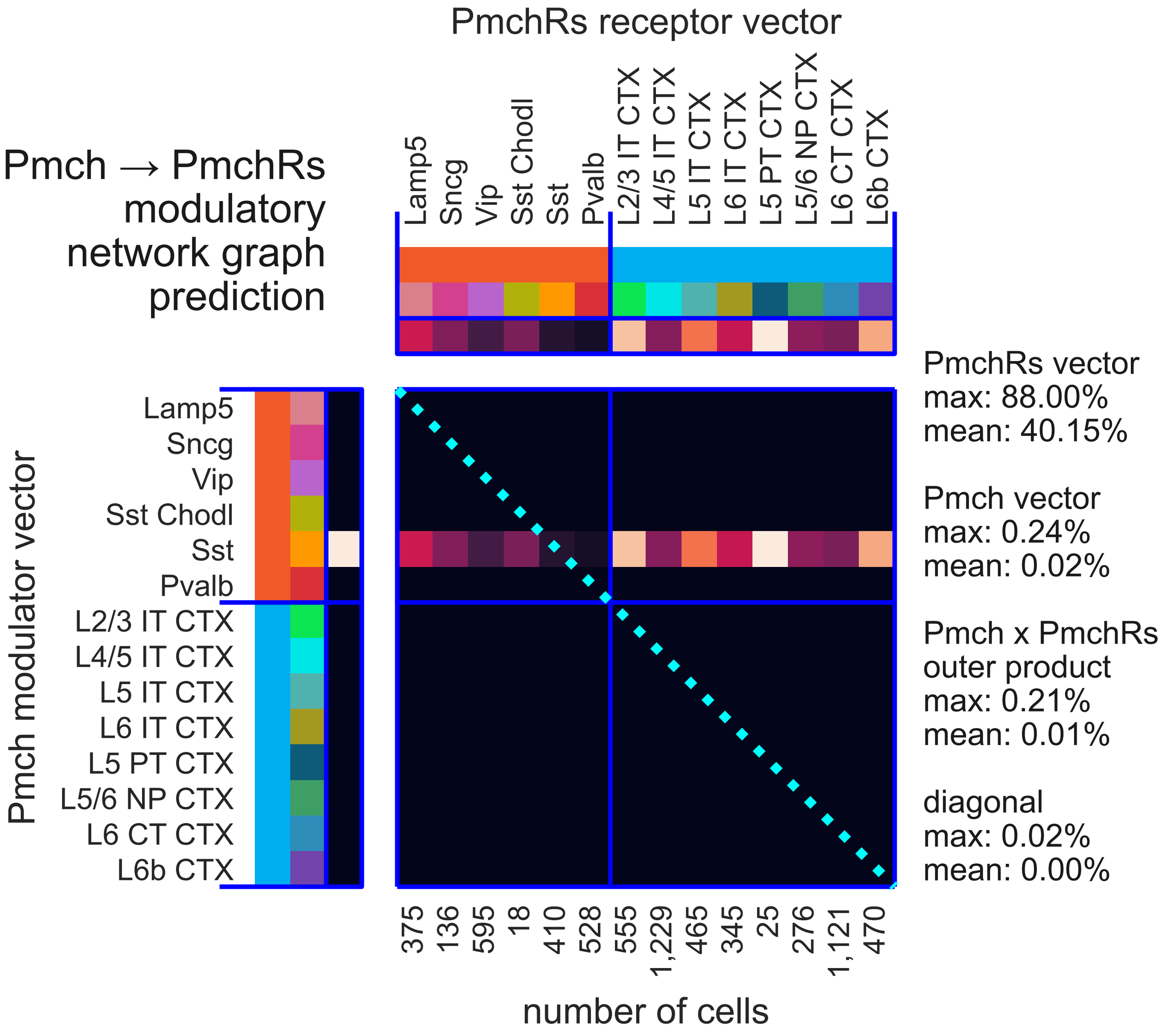
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



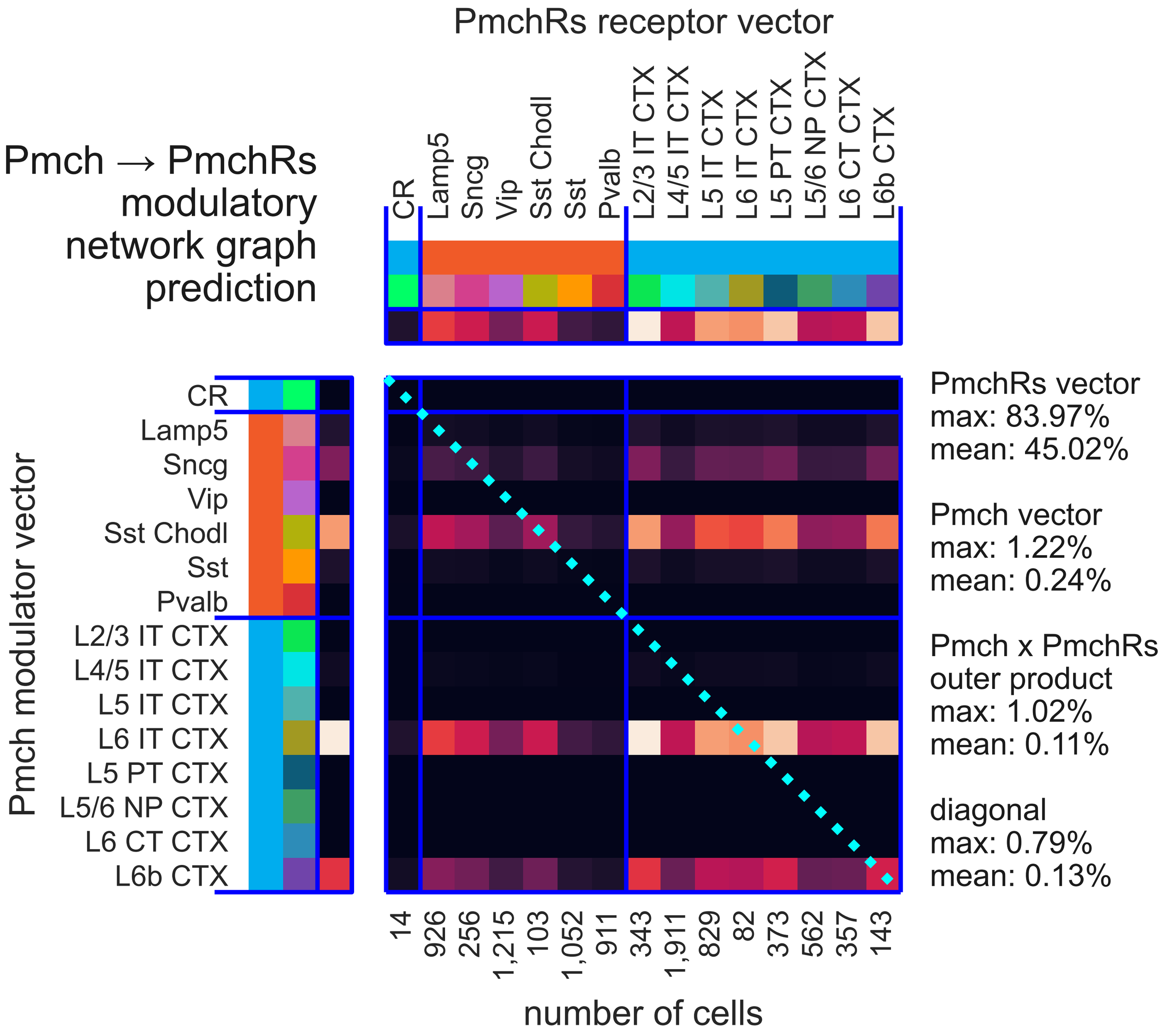
Y21ss thr=10 sn:12402
Gustatory Cortex (GU)



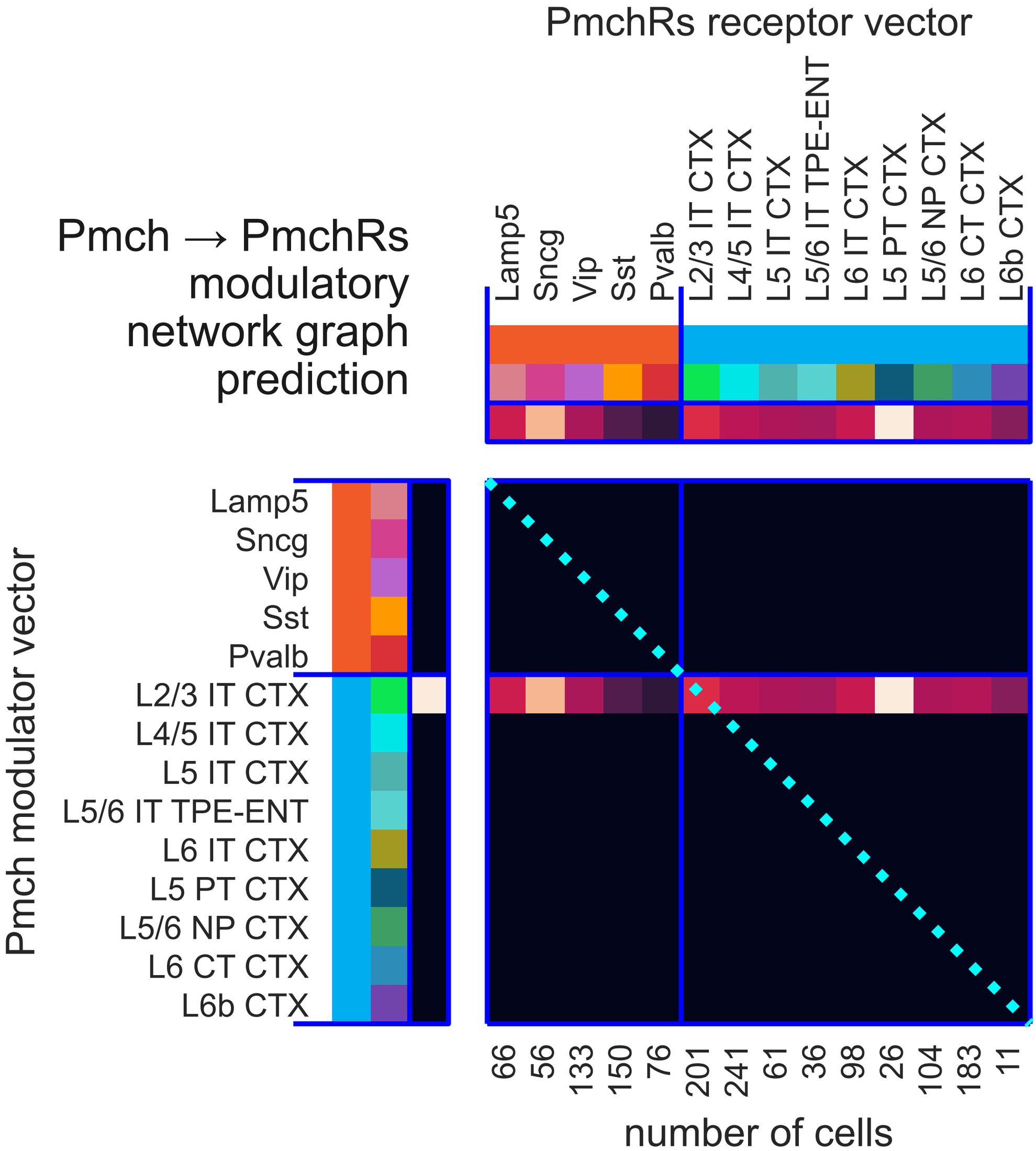
Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)



PmchRs vector
max: 53.85%
mean: 25.70%

Pmch vector
max: 0.50%
mean: 0.04%

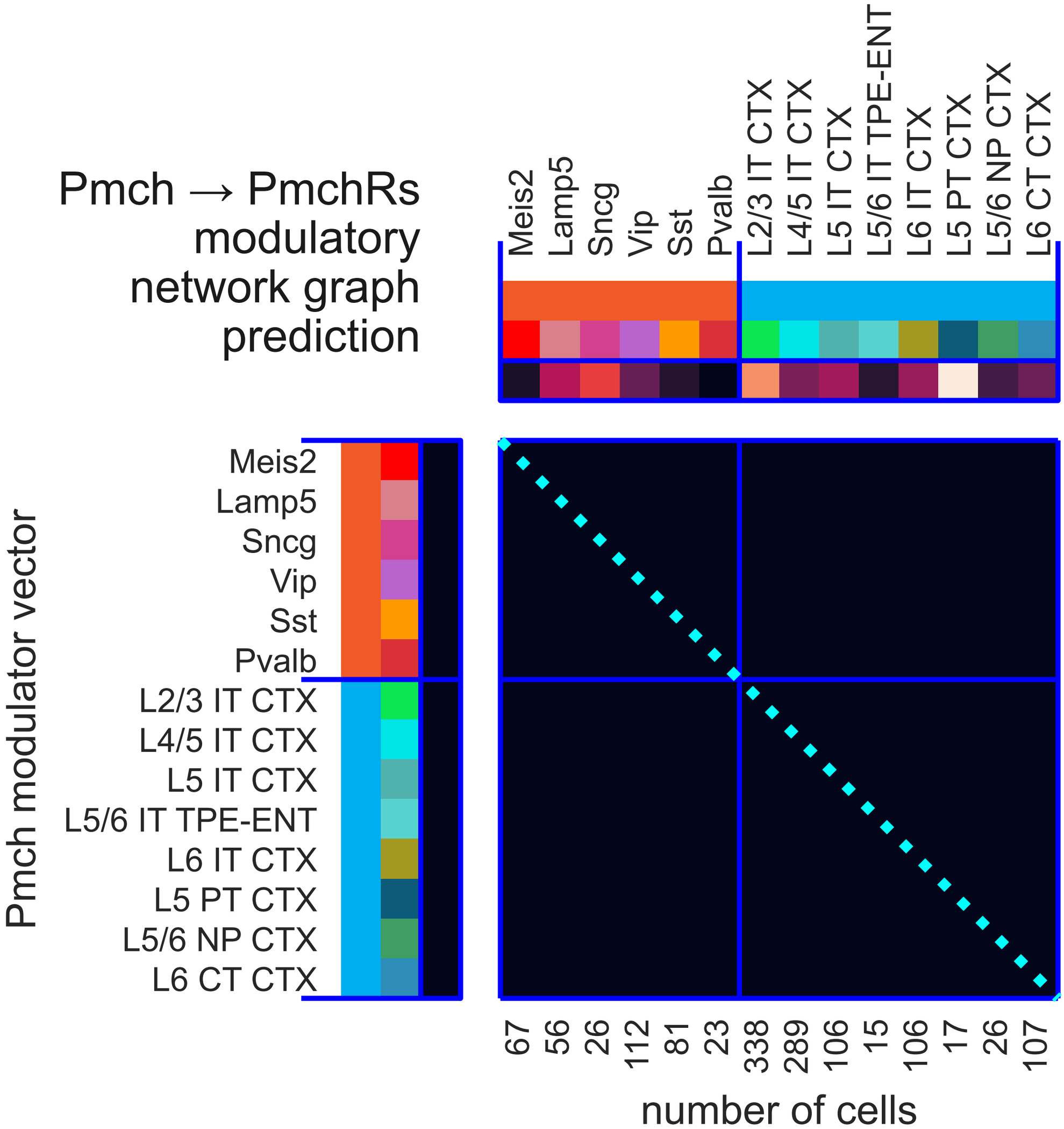
Pmch x PmchRs
outer product
max: 0.27%
mean: 0.01%

diagonal
max: 0.15%
mean: 0.01%

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

PmchRs receptor vector

Pmch → PmchRs
modulatory
network graph
prediction



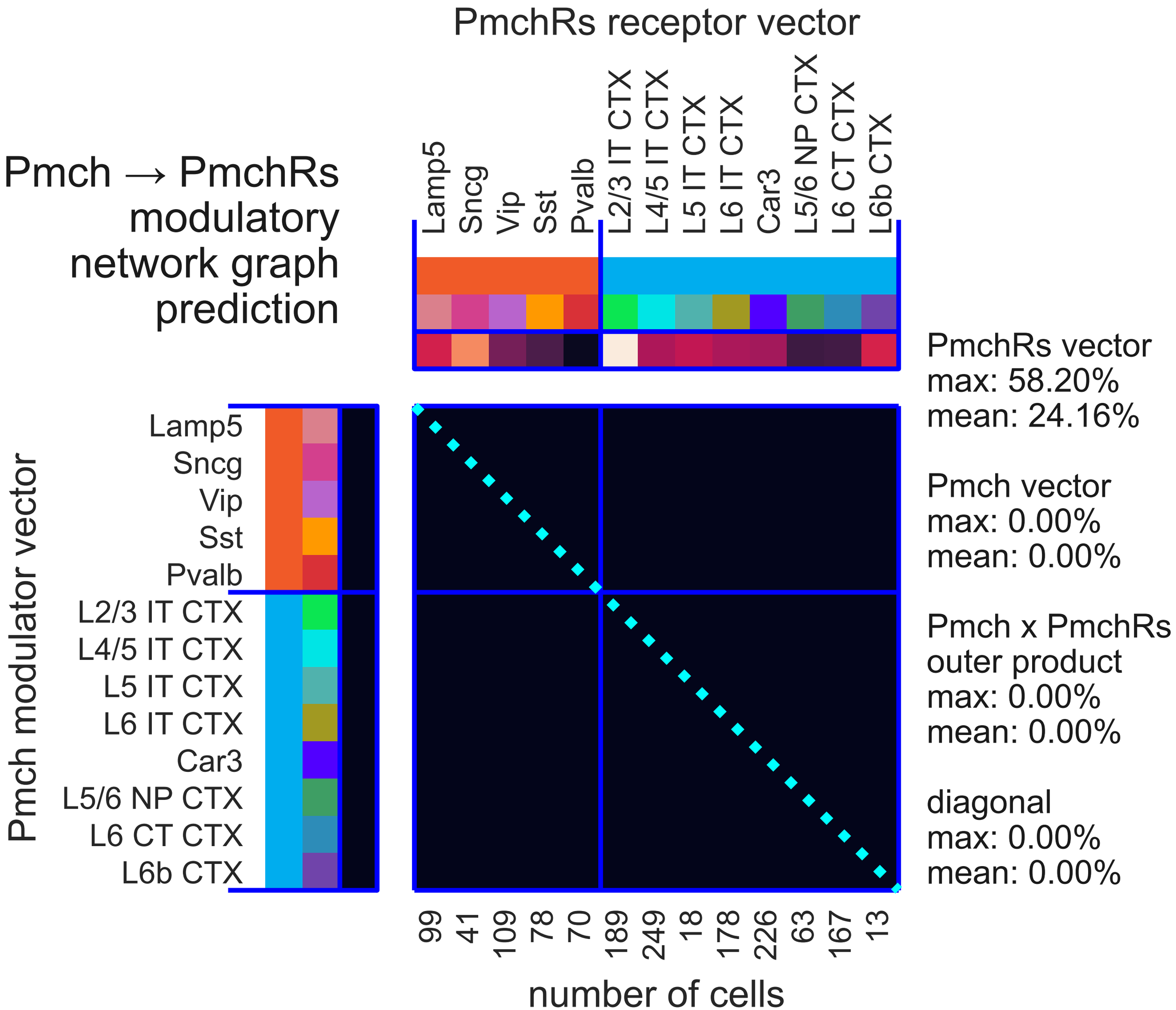
PmchRs vector
max: 64.71%
mean: 22.62%

Pmch vector
max: 0.00%
mean: 0.00%

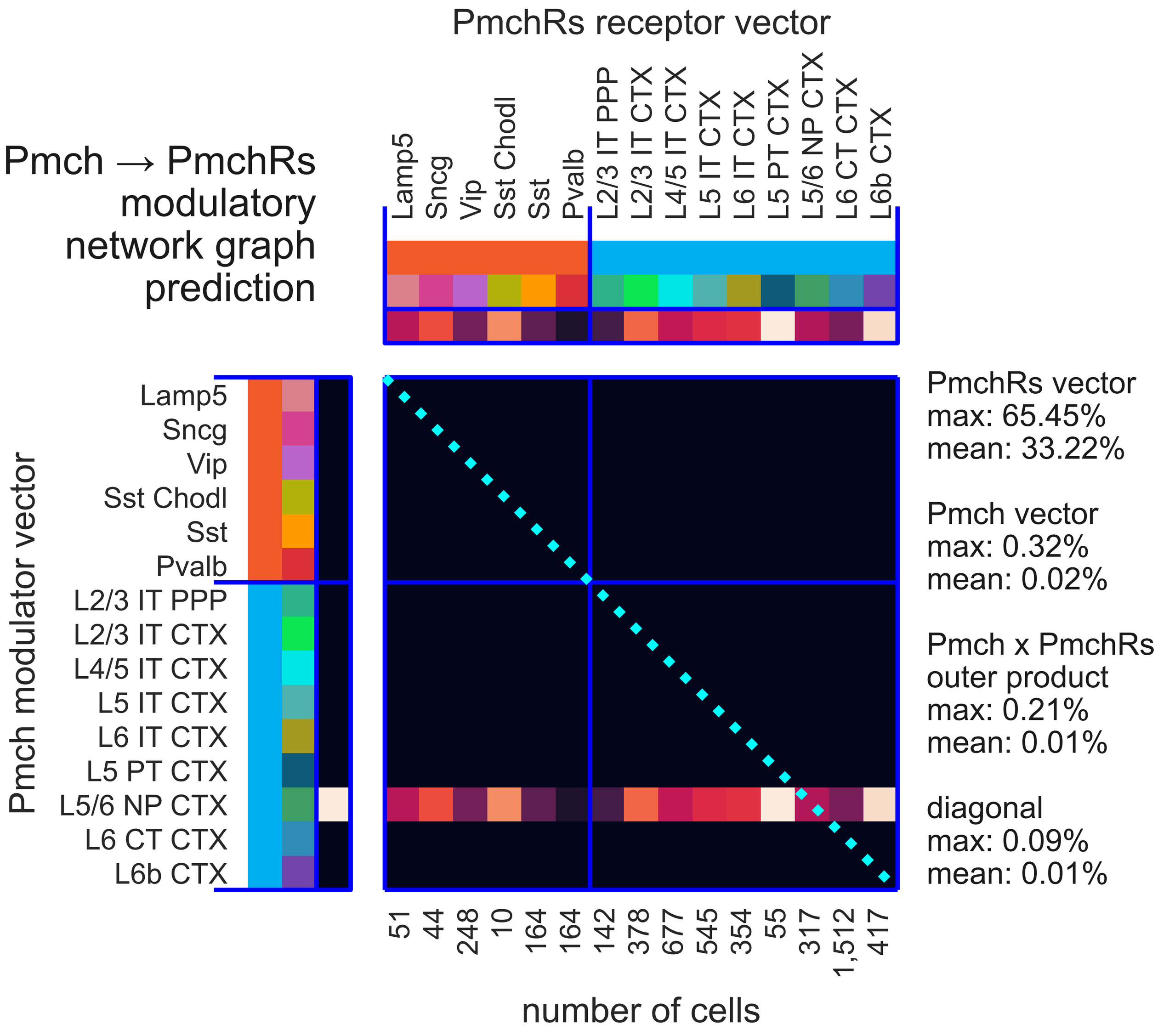
Pmch x PmchRs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



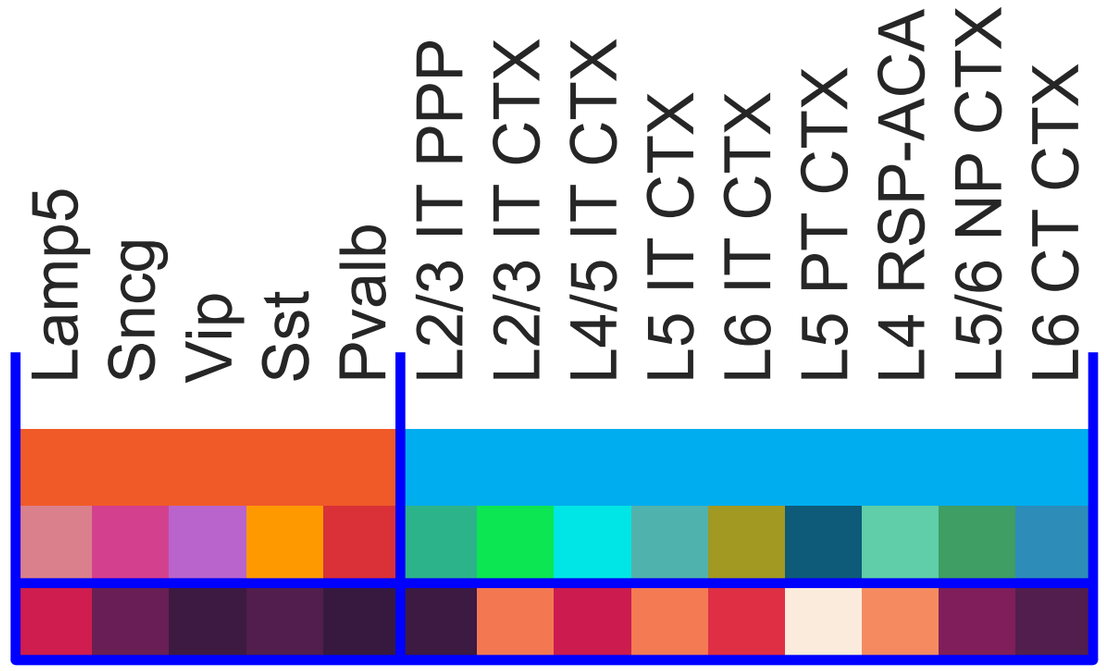
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

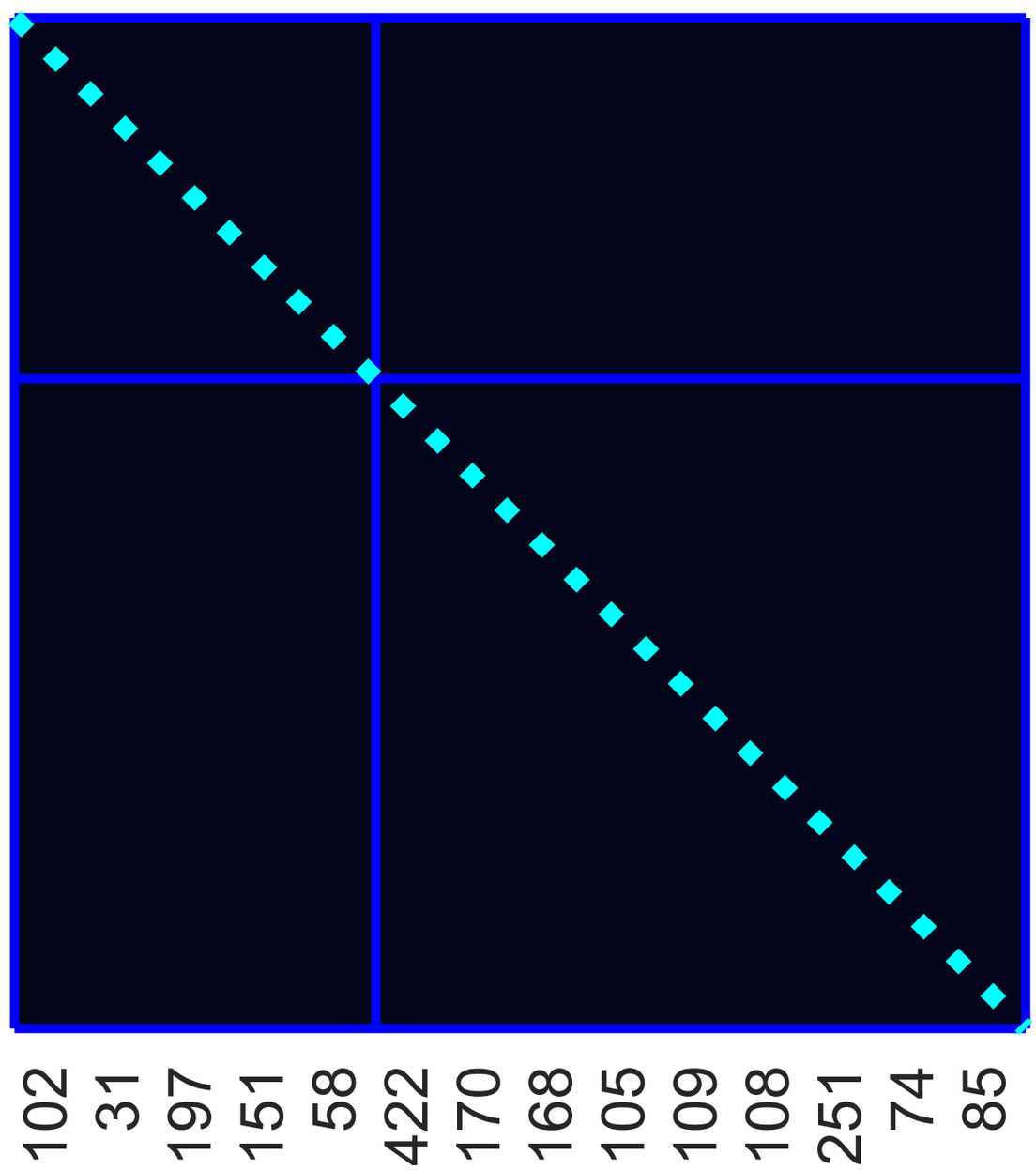


Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)

PmchRs receptor vector

Pmch → PmchRs
modulatory
network graph
prediction





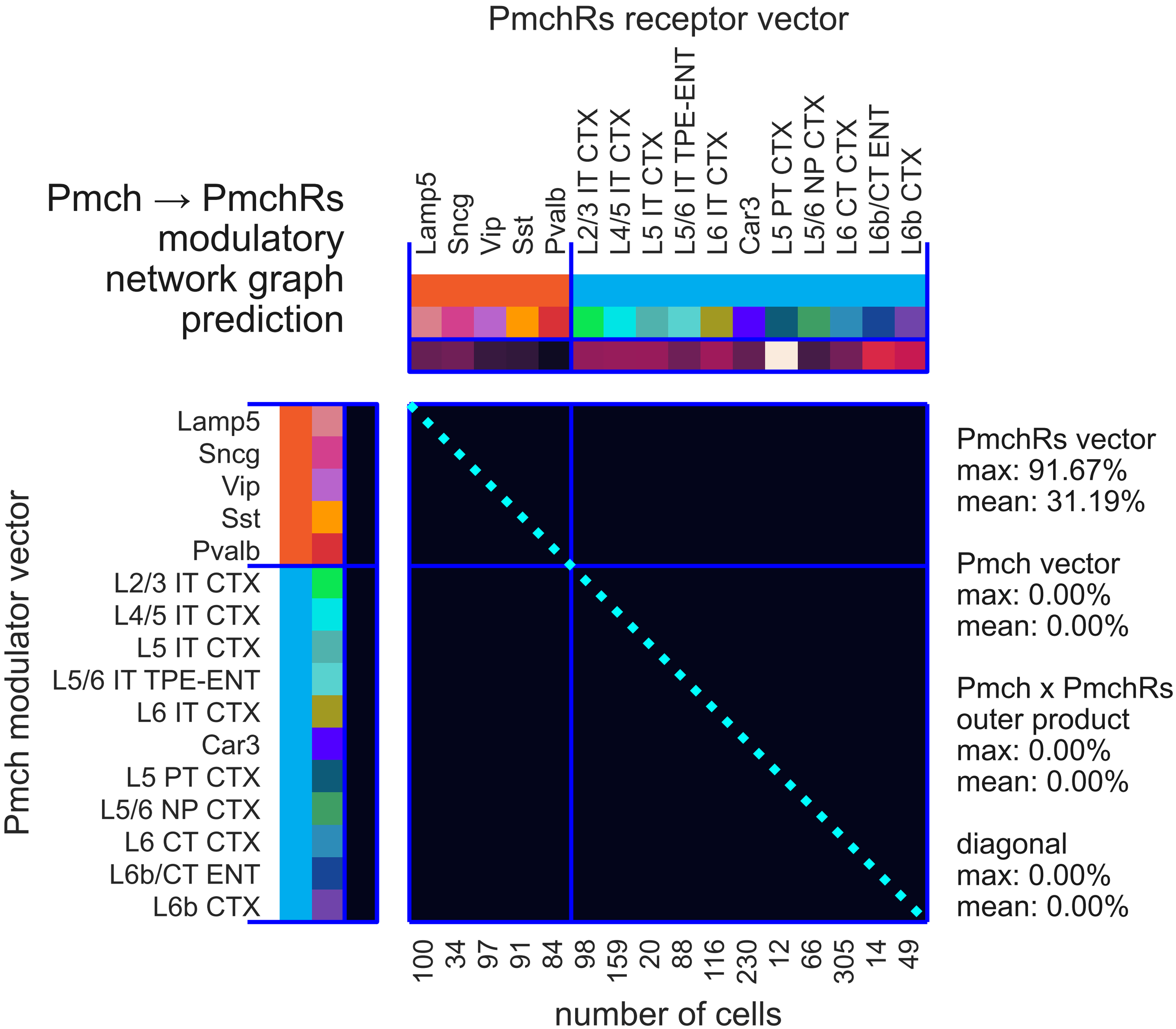
PmchRs vector
max: 71.30%
mean: 31.88%

Pmch vector
max: 0.00%
mean: 0.00%

Pmch x PmchRs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

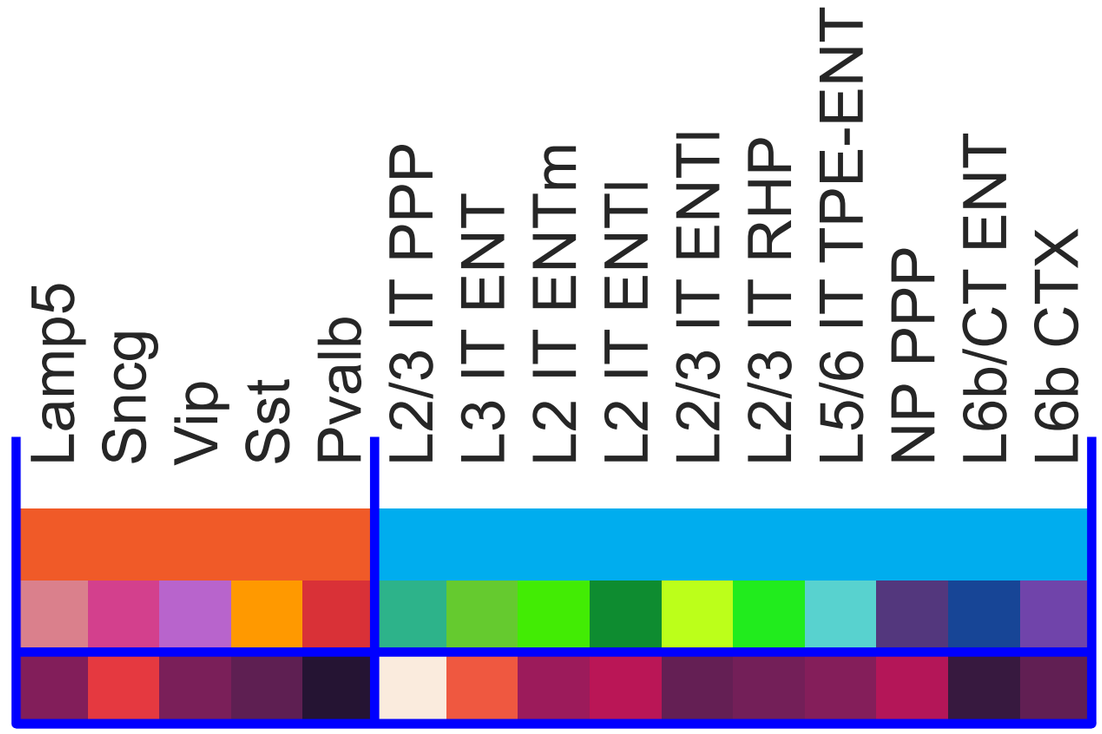
Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

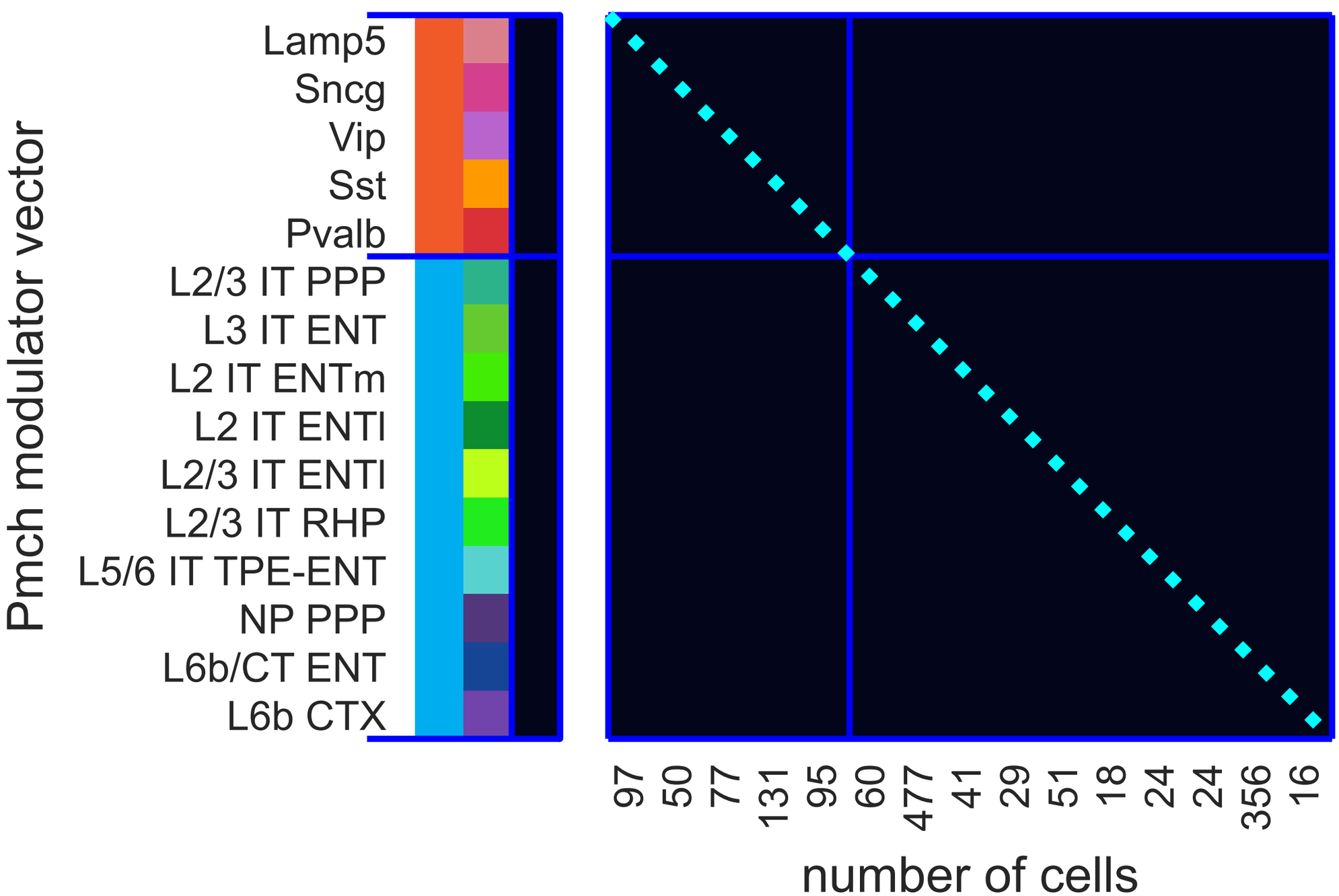


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

PmchRs receptor vector

Pmch → PmchRs
modulatory
network graph
prediction





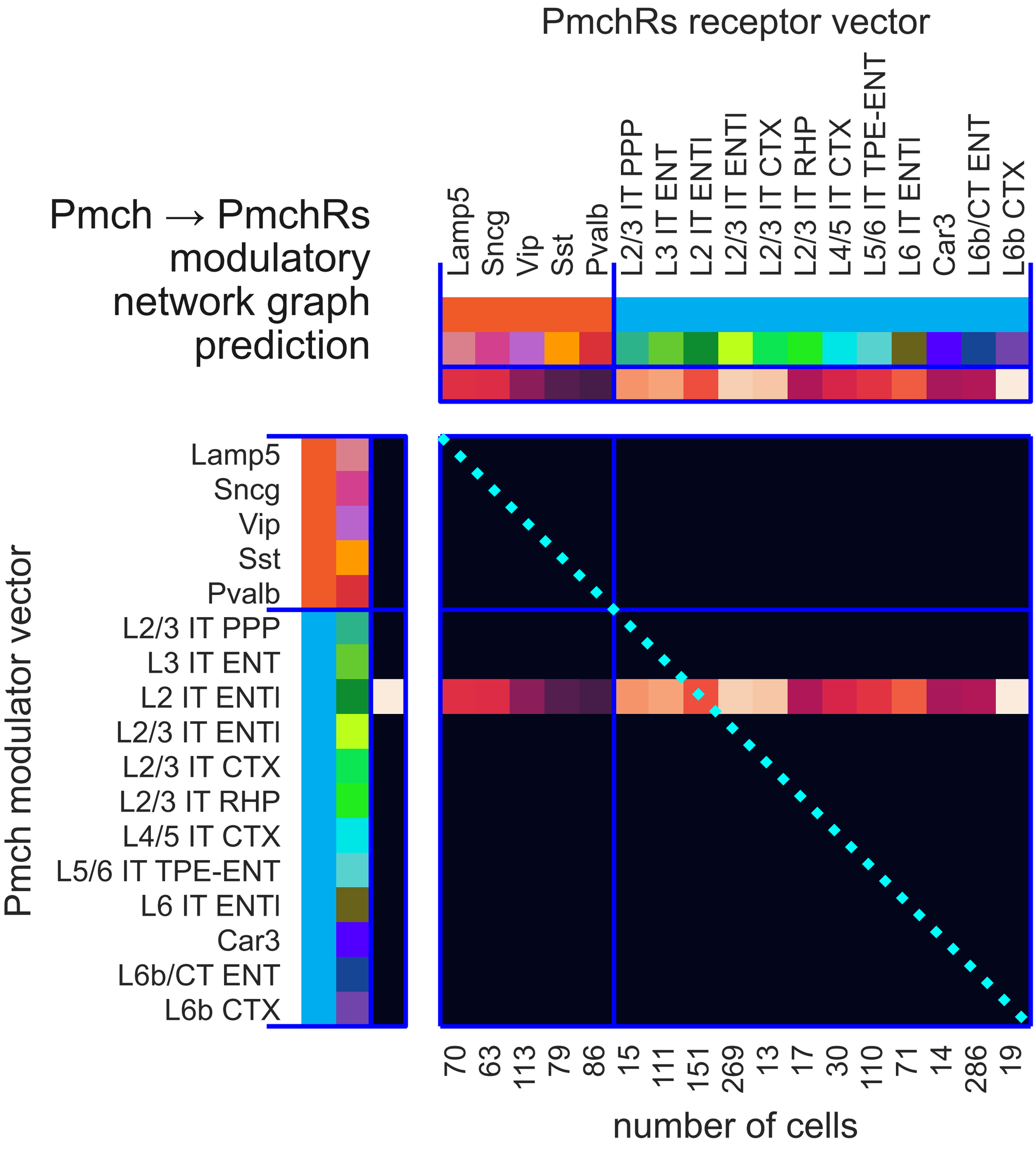
PmchRs vector
max: 75.00%
mean: 29.00%

Pmch vector
max: 0.00%
mean: 0.00%

Pmch x PmchRs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)



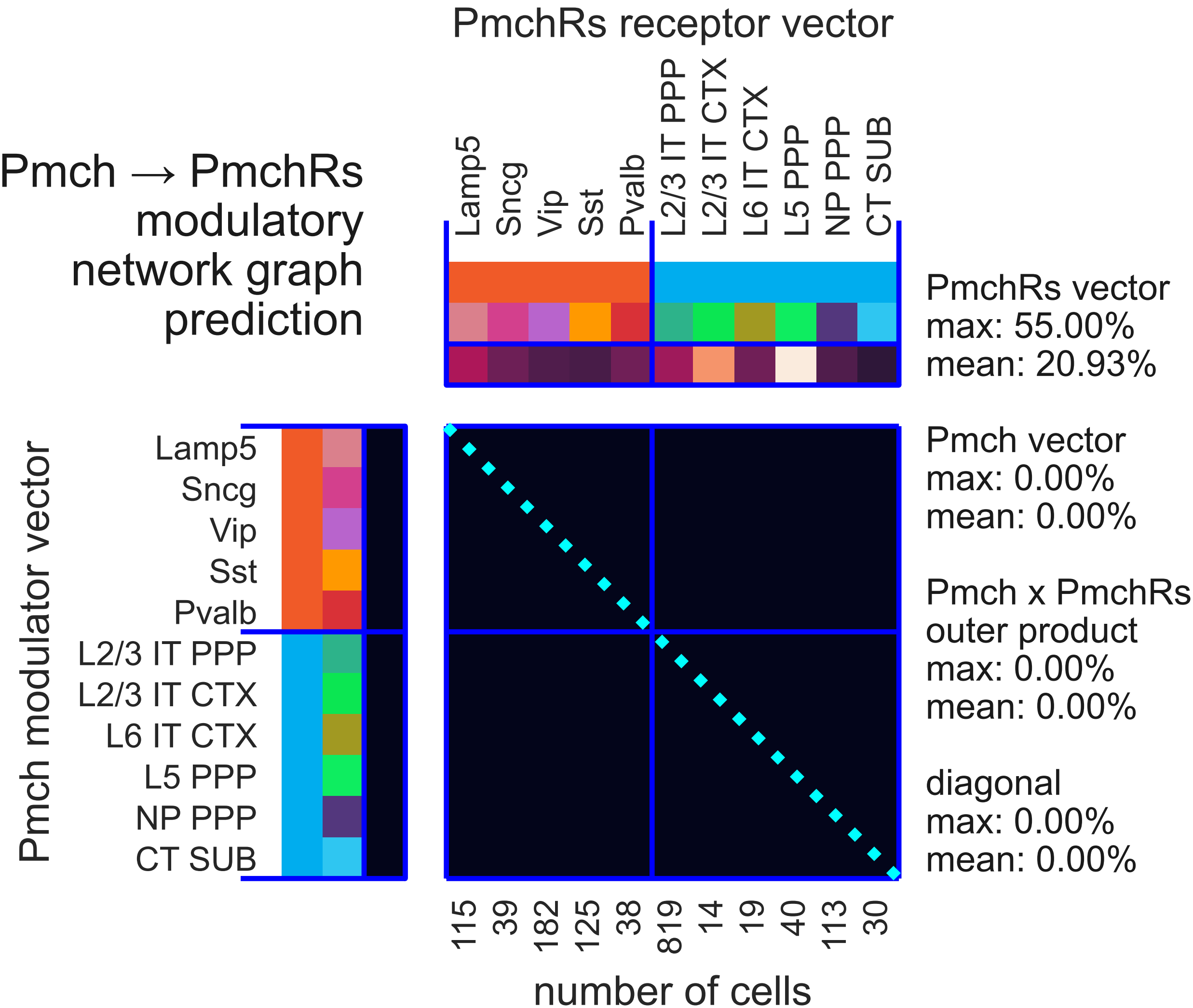
PmchRs vector
max: 68.42%
mean: 40.17%

Pmch vector
max: 1.32%
mean: 0.08%

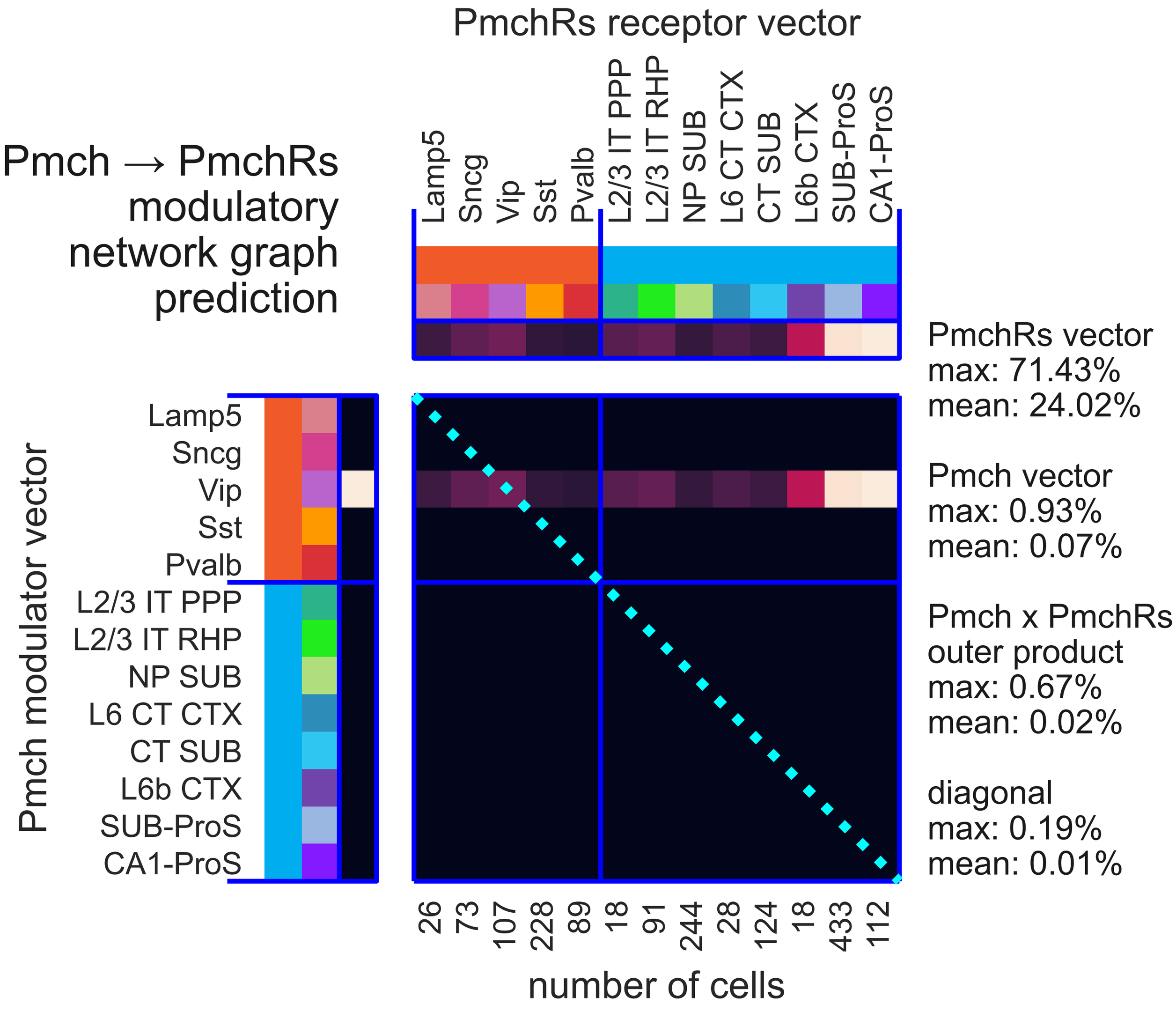
Pmch x PmchRs
outer product
max: 0.91%
mean: 0.03%

diagonal
max: 0.57%
mean: 0.03%

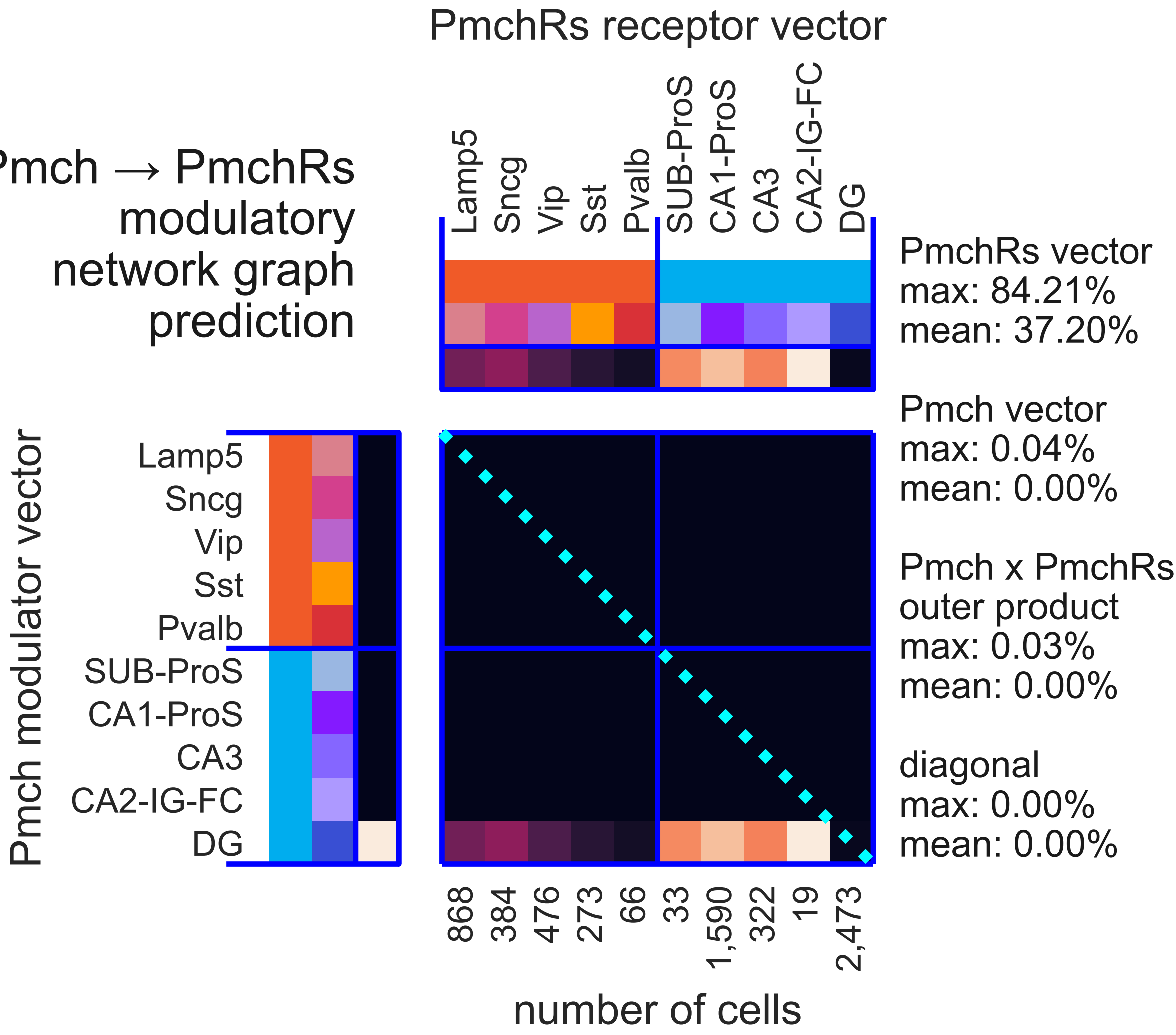
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

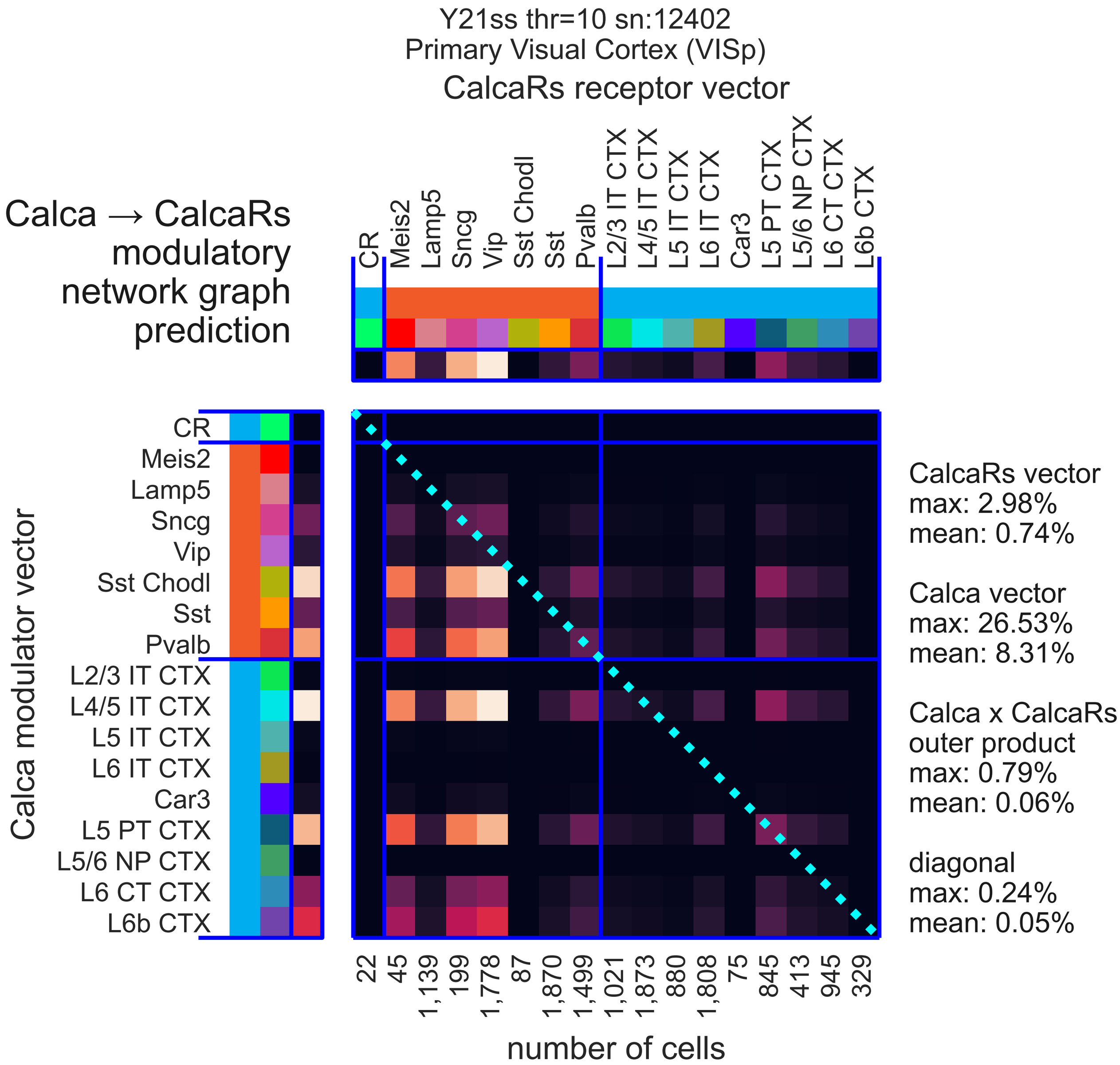


Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



Y21ss thr=10 sn:12402
Hippocampus (HIP)

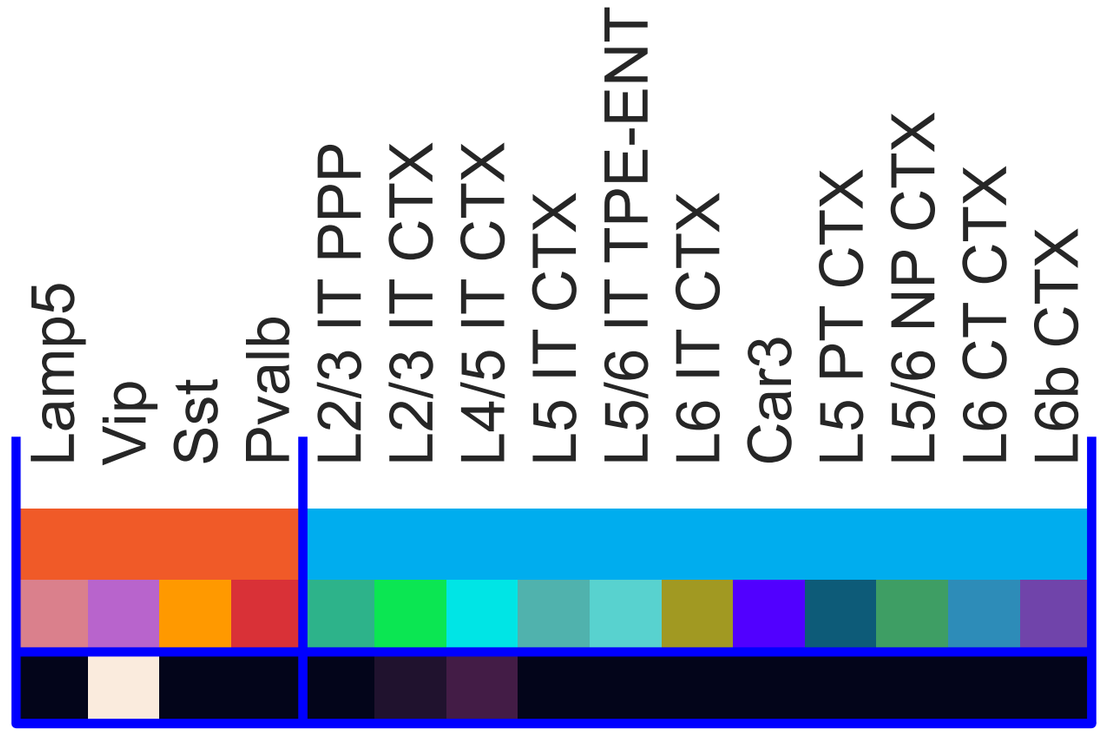


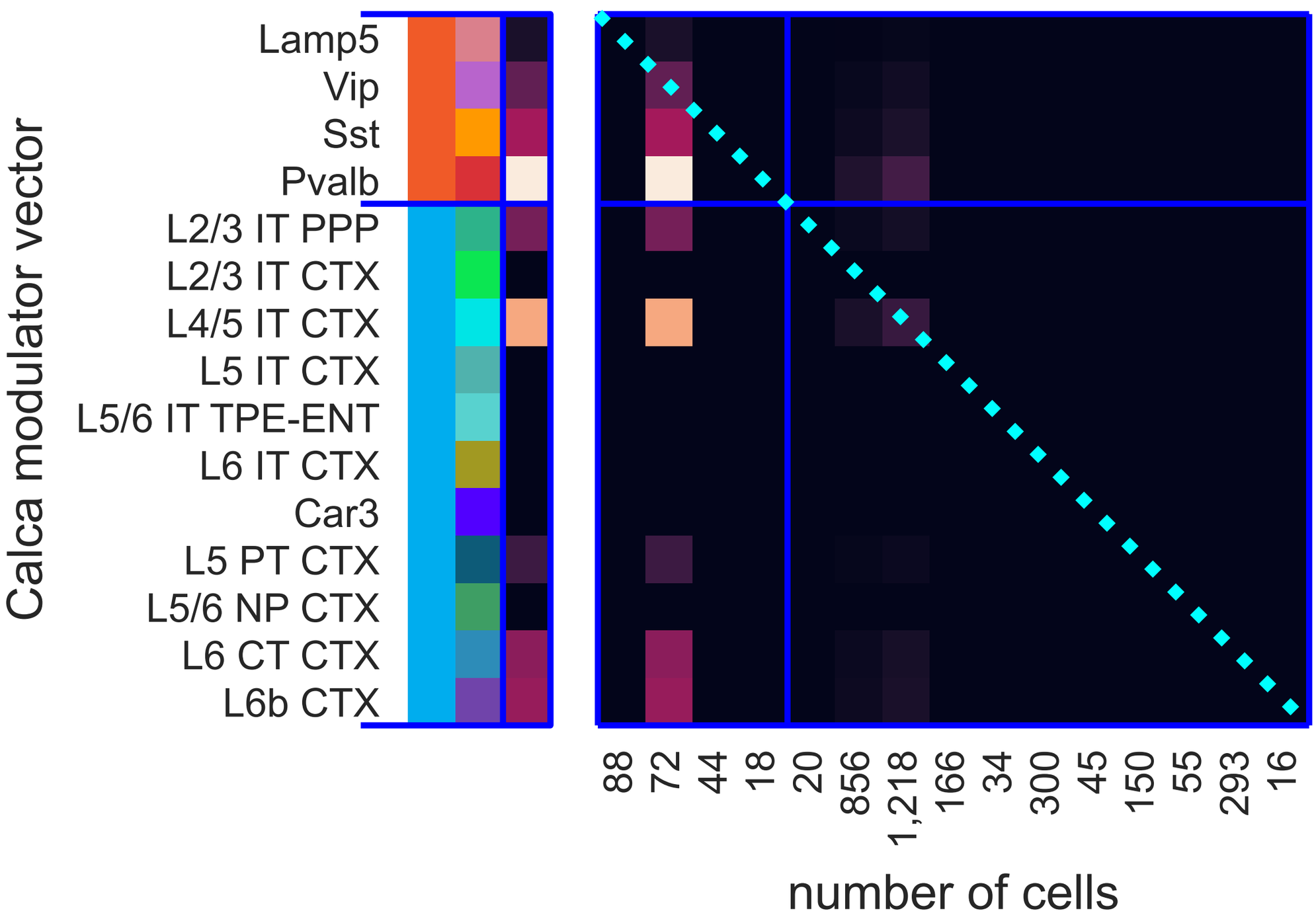

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
CalcaRs receptor vector
Calca → CalcaRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Calca modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
CalcaRs vector
max: 2.98%
mean: 0.74%
Calca vector
max: 26.53%
mean: 8.31%
Calca x CalcaRs
outer product
max: 0.79%
mean: 0.06%
diagonal
max: 0.24%
mean: 0.05%

Y21ss thr=10 sn:12402
Visual Cortex (VIS)

CalcaRs receptor vector

Calca → CalcaRs
modulatory
network graph
prediction





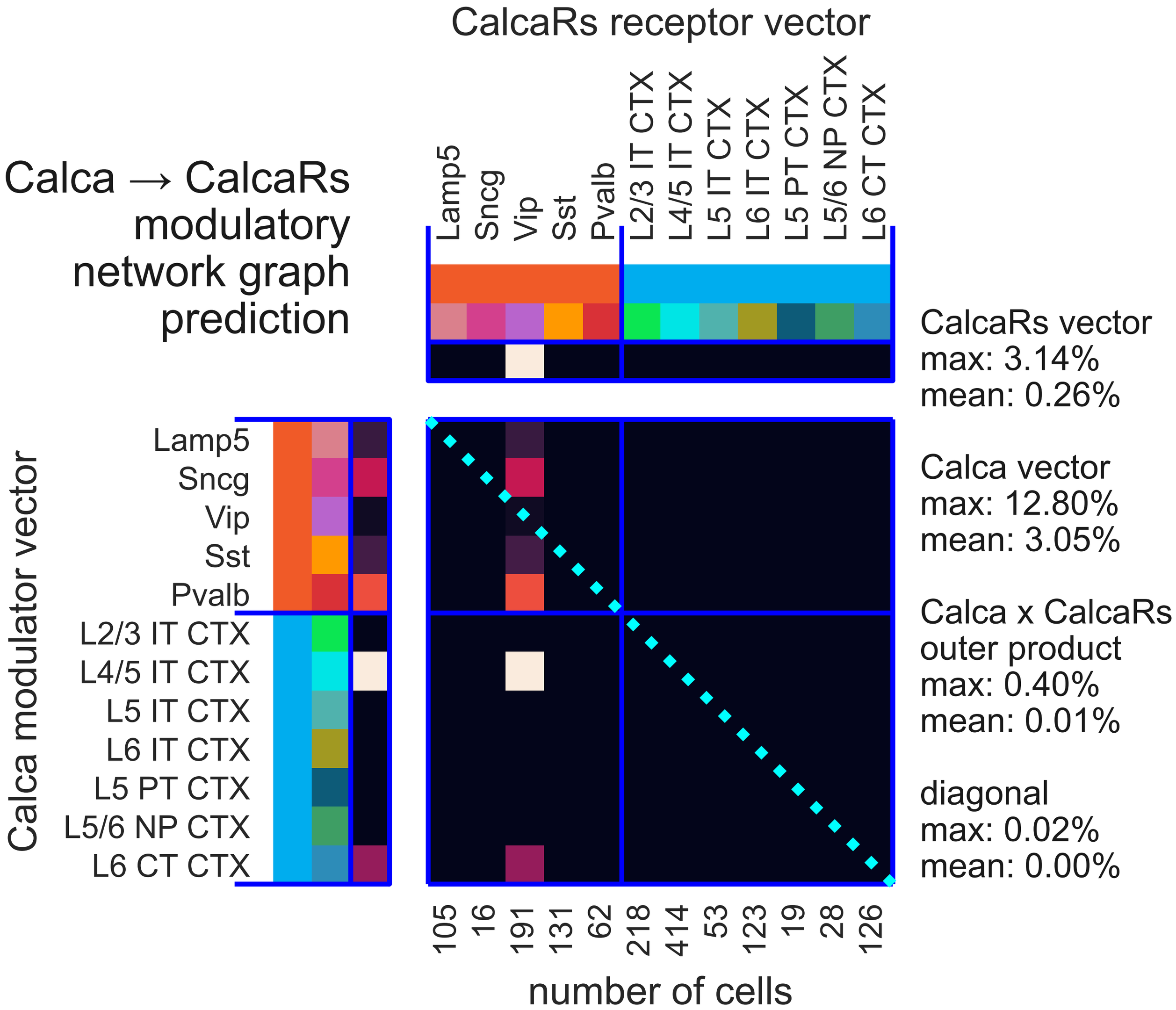
CalcaRs vector
max: 1.39%
mean: 0.12%

Calca vector
max: 16.67%
mean: 4.15%

Calca x CalcaRs
outer product
max: 0.23%
mean: 0.00%

diagonal
max: 0.06%
mean: 0.01%

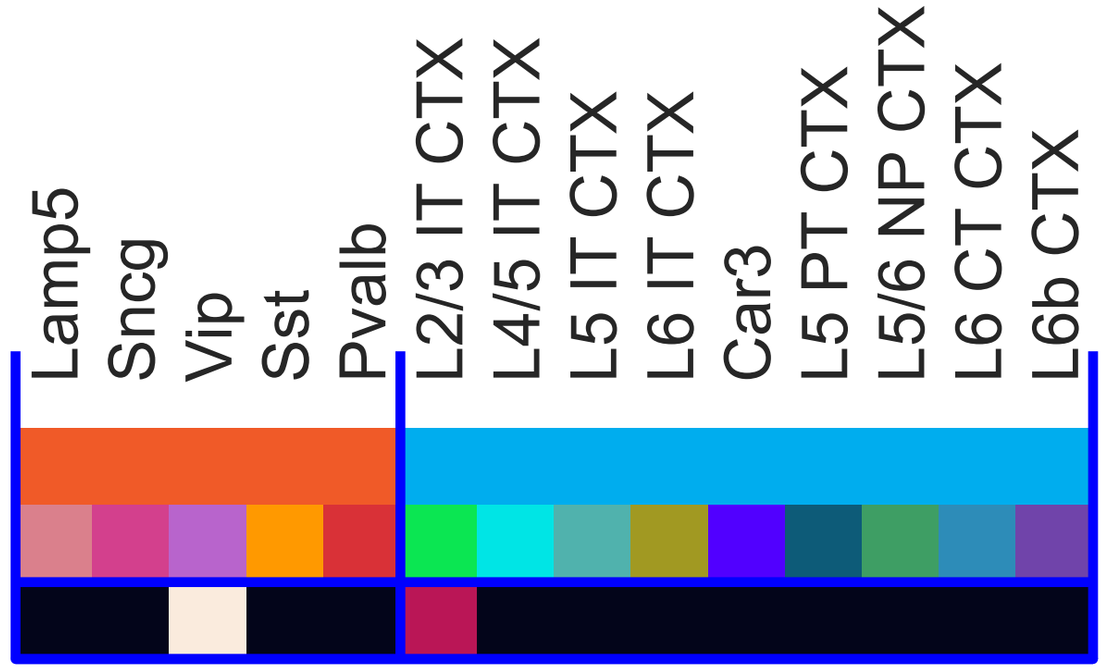
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)

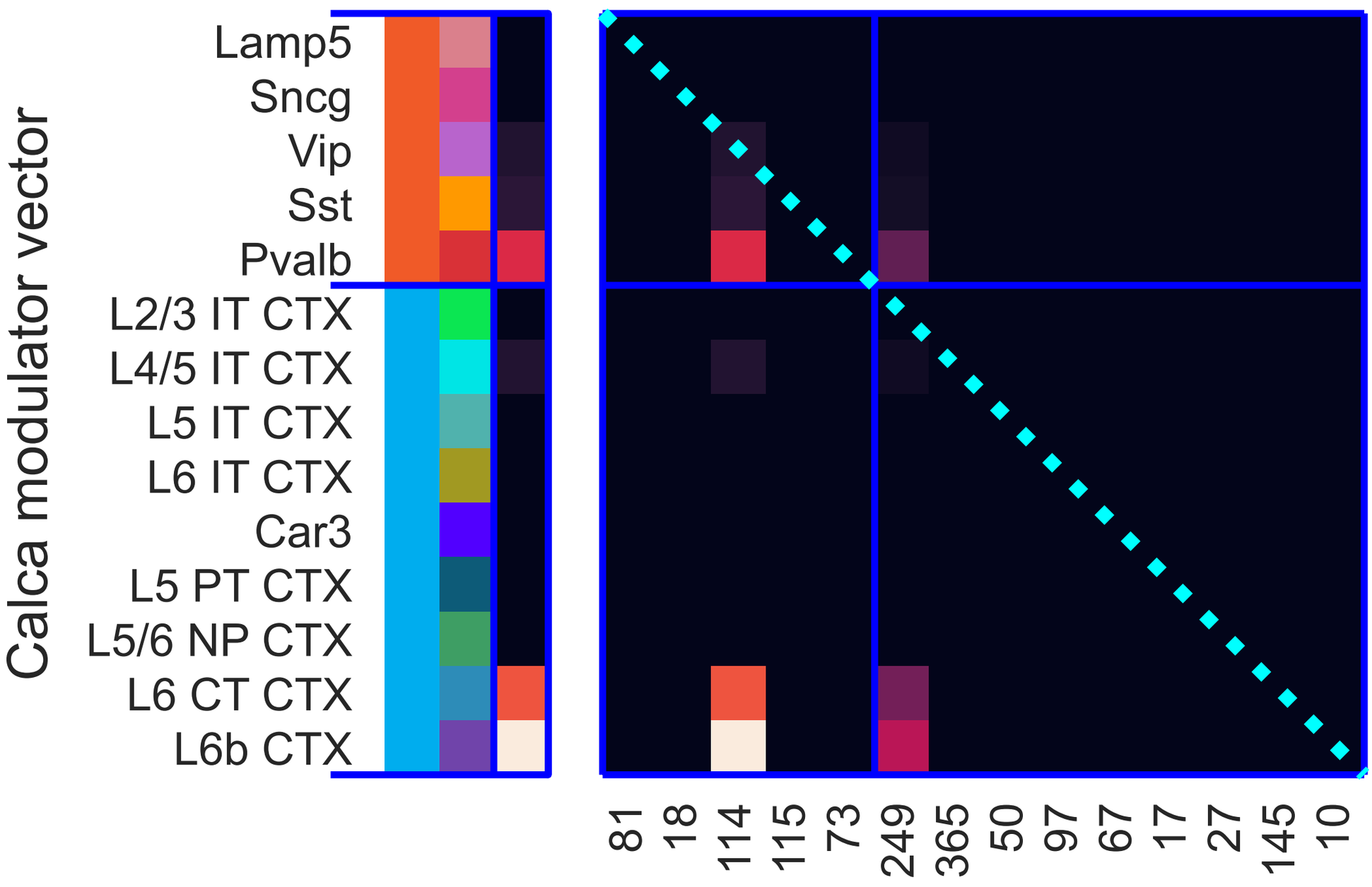


Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

CalcaRs receptor vector

Calca → CalcaRs
modulatory
network graph
prediction





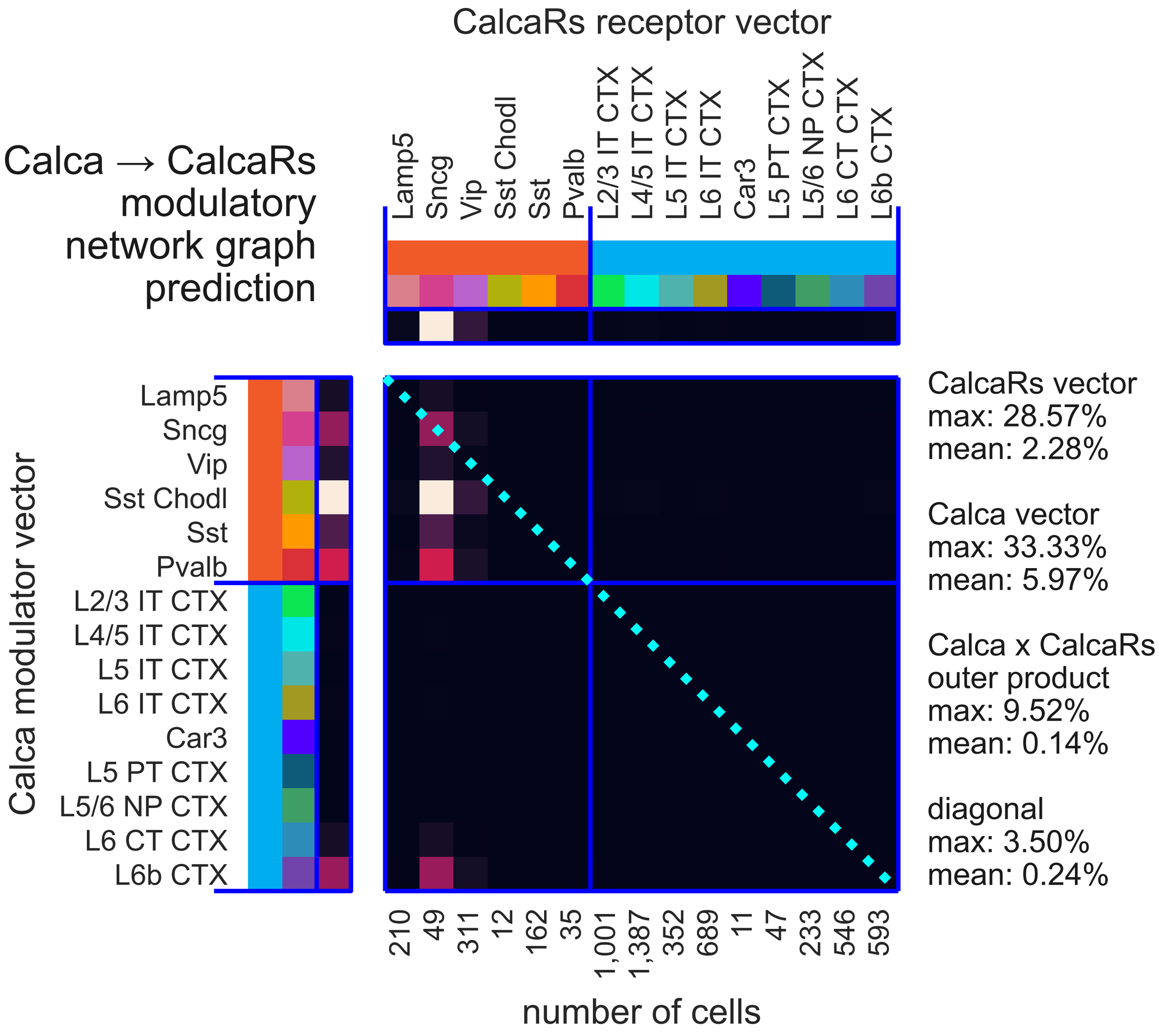
CalcaRs vector
max: 0.88%
mean: 0.09%

Calca vector
max: 30.00%
mean: 5.33%

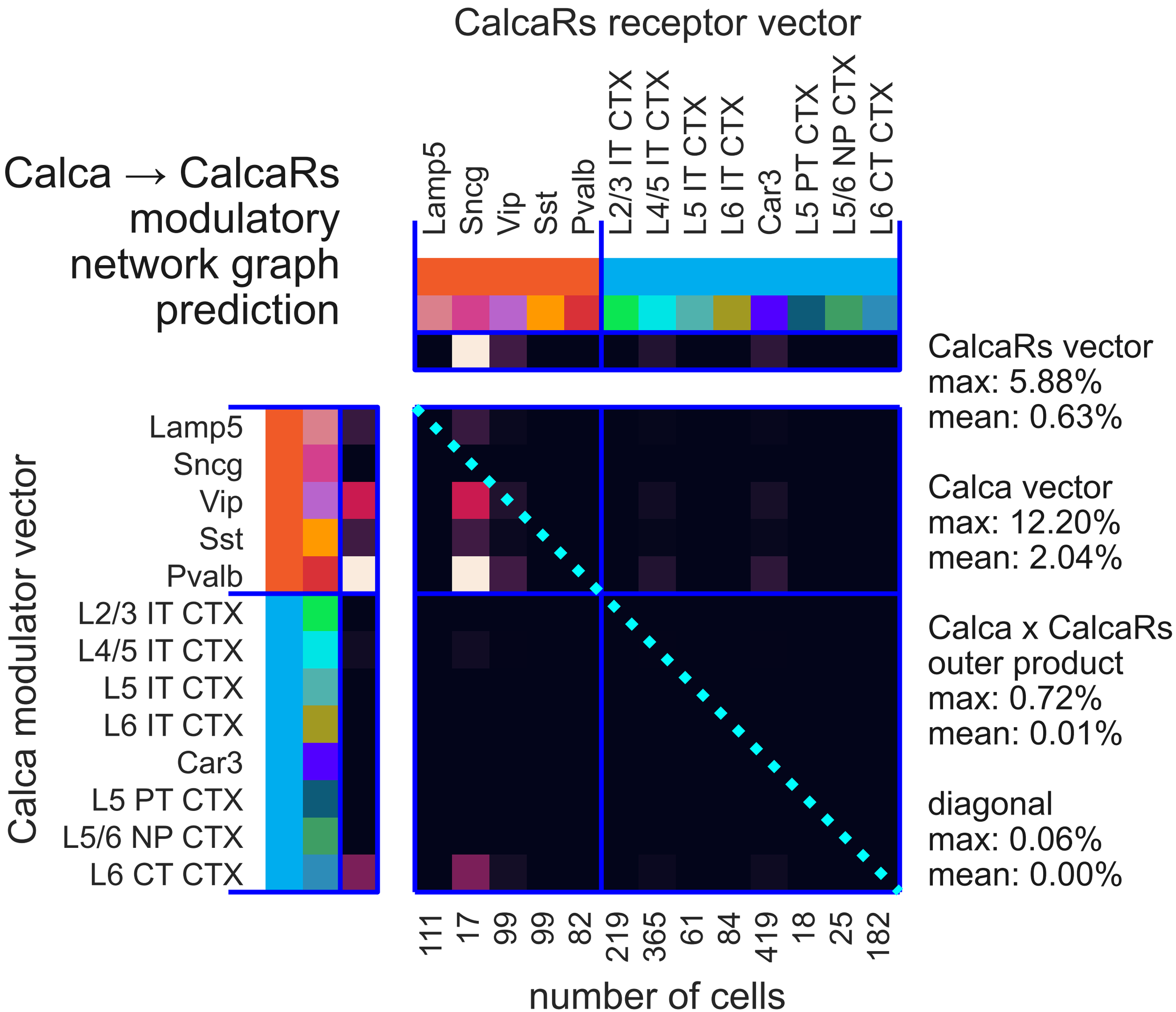
Calca x CalcaRs
outer product
max: 0.26%
mean: 0.00%

diagonal
max: 0.02%
mean: 0.00%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



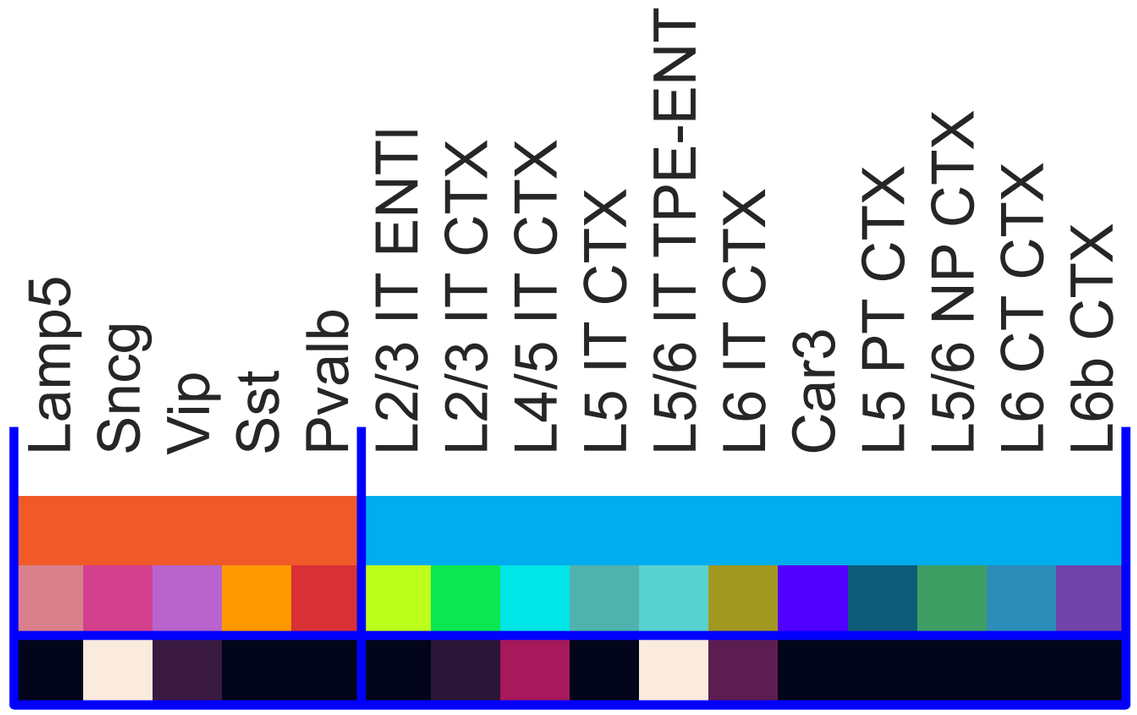
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)

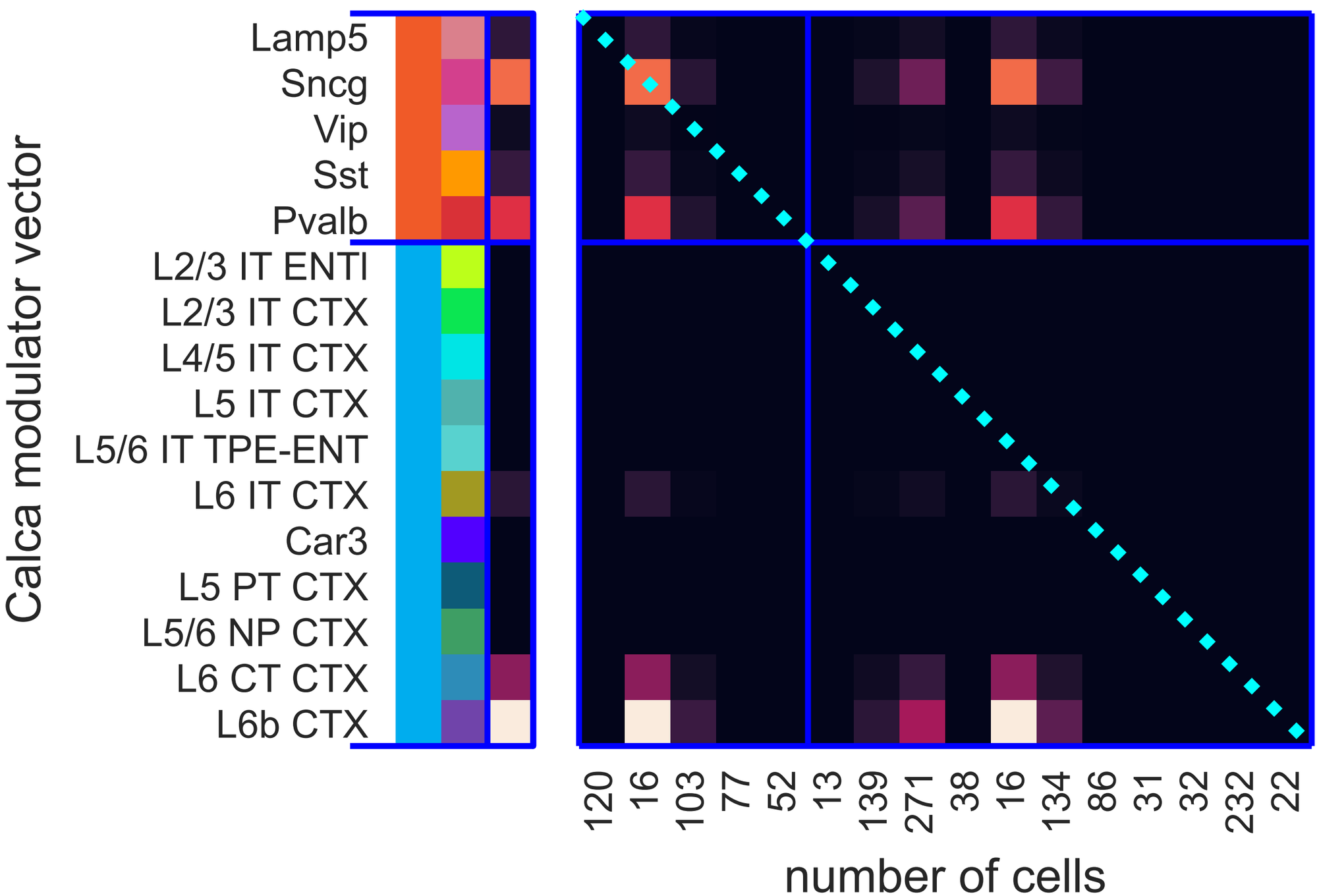


Y21ss thr=10 sn:12402
Gustatory Cortex (GU)

CalcaRs receptor vector

Calca → CalcaRs
modulatory
network graph
prediction





CalcaRs vector
max: 6.25%
mean: 1.14%

Calca vector
max: 27.27%
mean: 5.13%

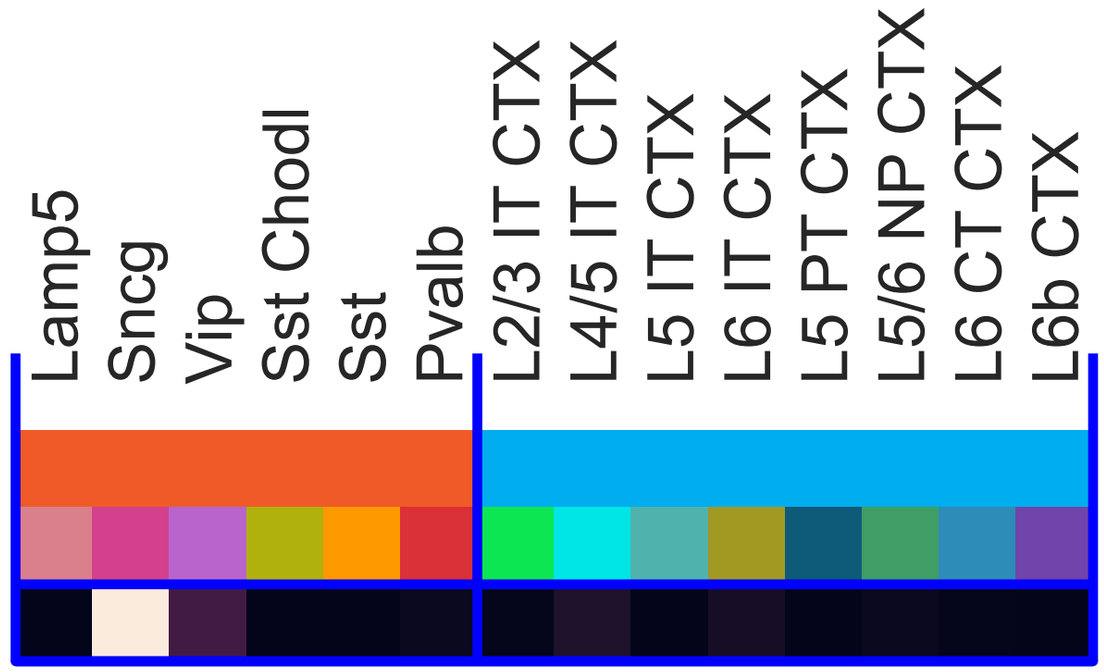
Calca x CalcaRs
outer product
max: 1.70%
mean: 0.06%

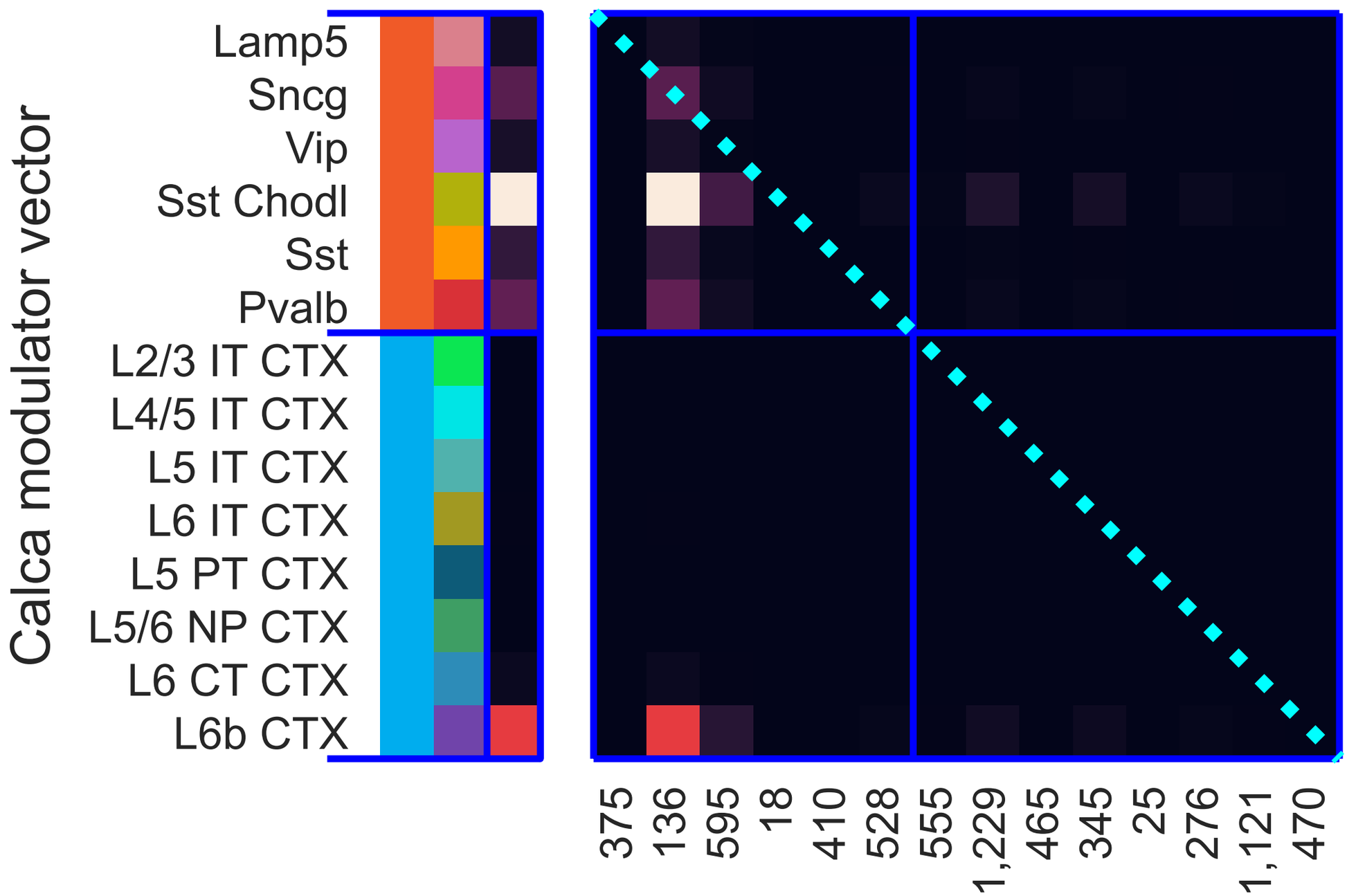
diagonal
max: 1.17%
mean: 0.08%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)

CalcaRs receptor vector

Calca → CalcaRs
modulatory
network graph
prediction





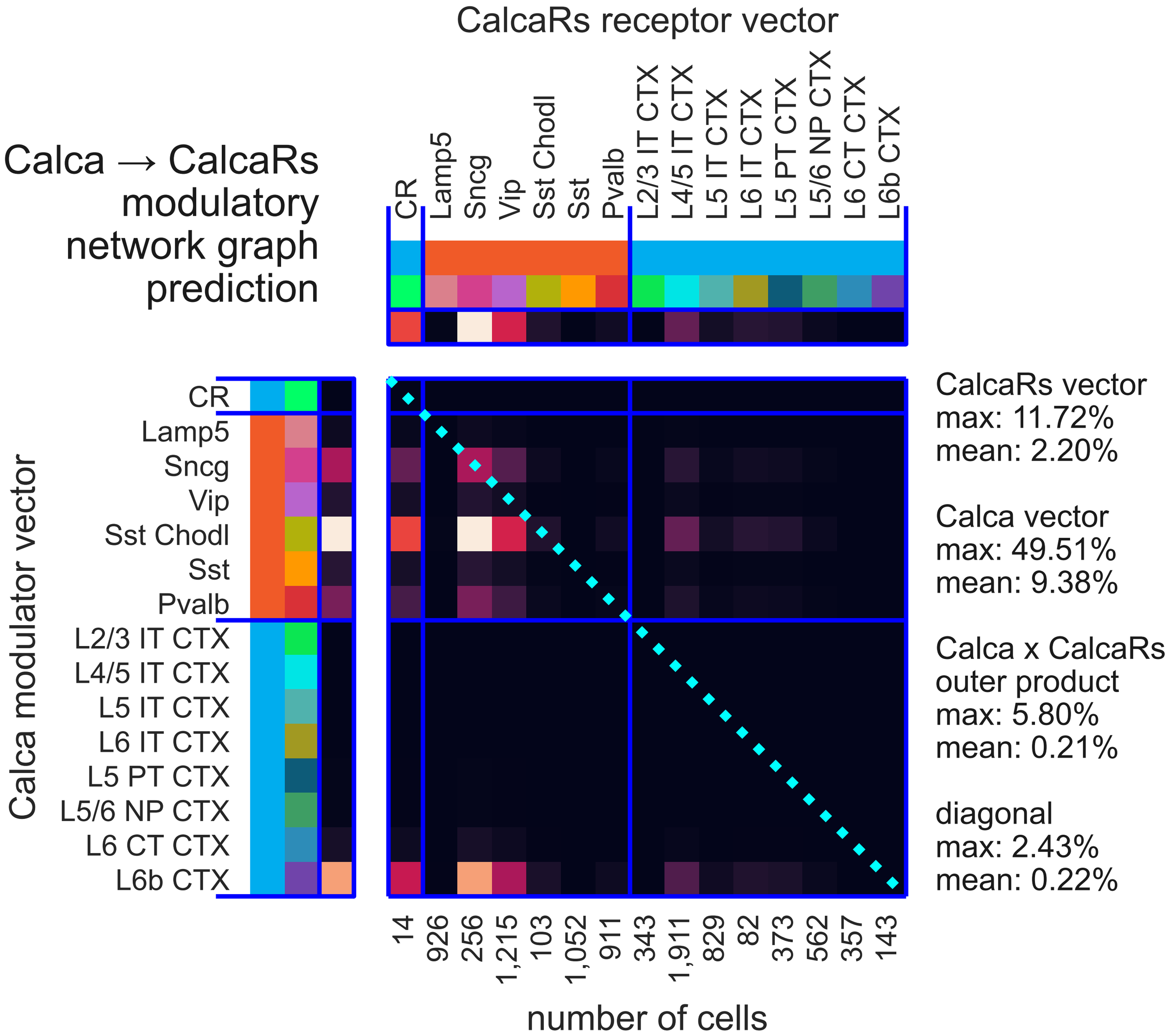
CalcaRs vector
max: 15.44%
mean: 1.52%

Calca vector
max: 38.89%
mean: 6.53%

Calca x CalcaRs
outer product
max: 6.00%
mean: 0.10%

diagonal
max: 1.36%
mean: 0.11%

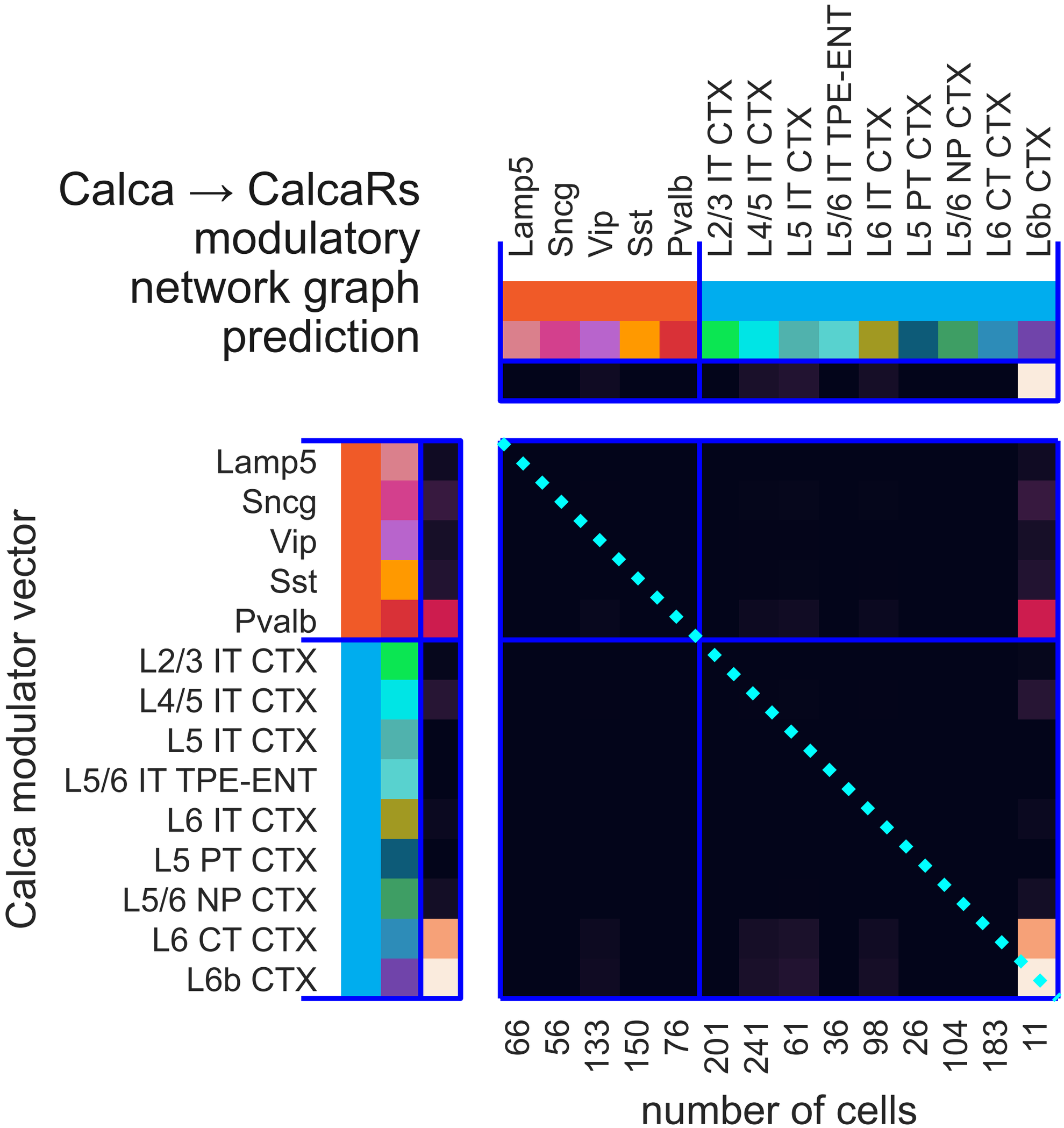
Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

CalcaRs receptor vector

Calca → CalcaRs
modulatory
network graph
prediction



CalcaRs vector
max: 18.18%
mean: 1.63%

Calca vector
max: 36.36%
mean: 7.42%

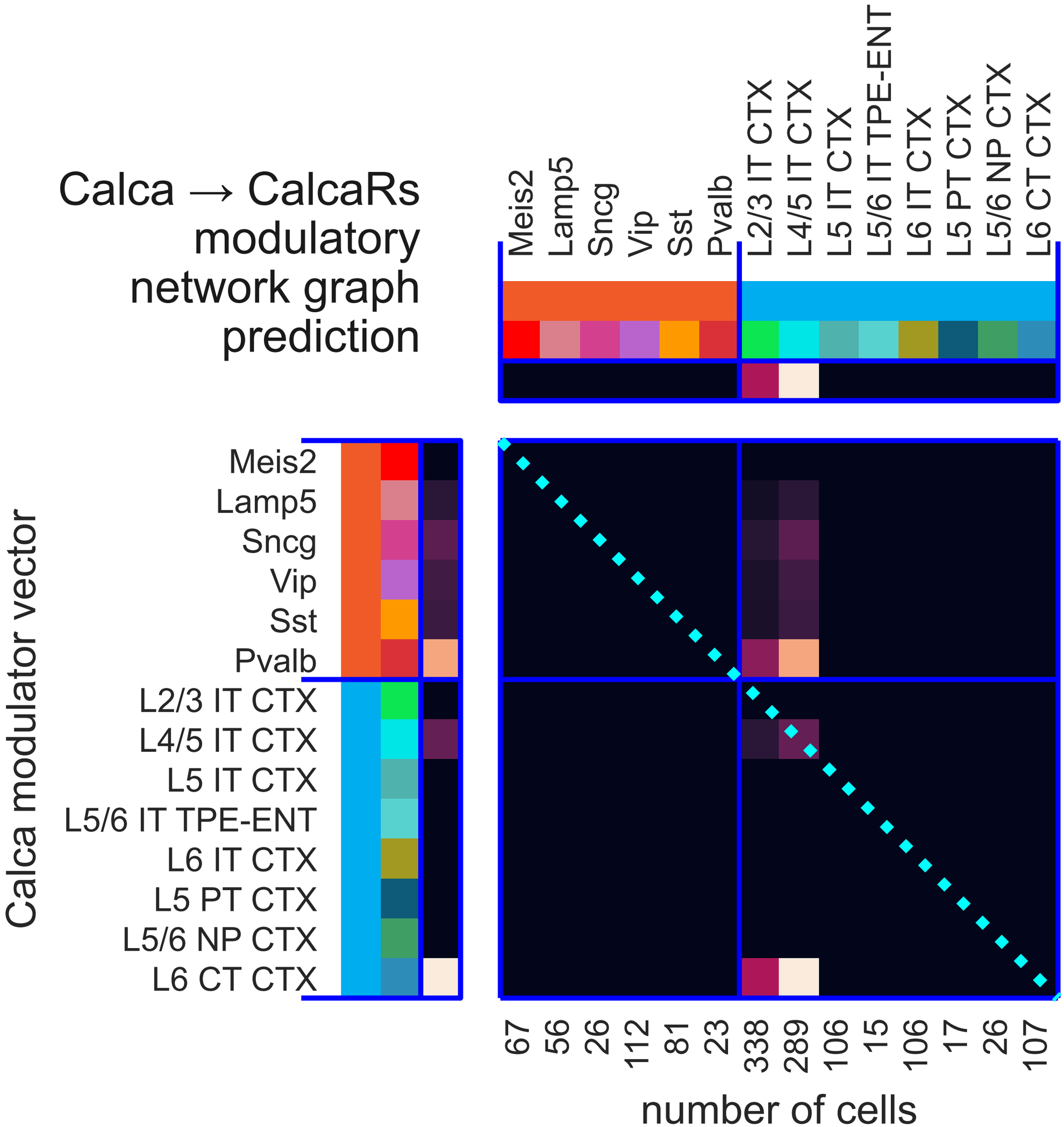
Calca x CalcaRs
outer product
max: 6.61%
mean: 0.12%

diagonal
max: 6.61%
mean: 0.48%

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

CalcaRs receptor vector

Calca → CalcaRs
modulatory
network graph
prediction



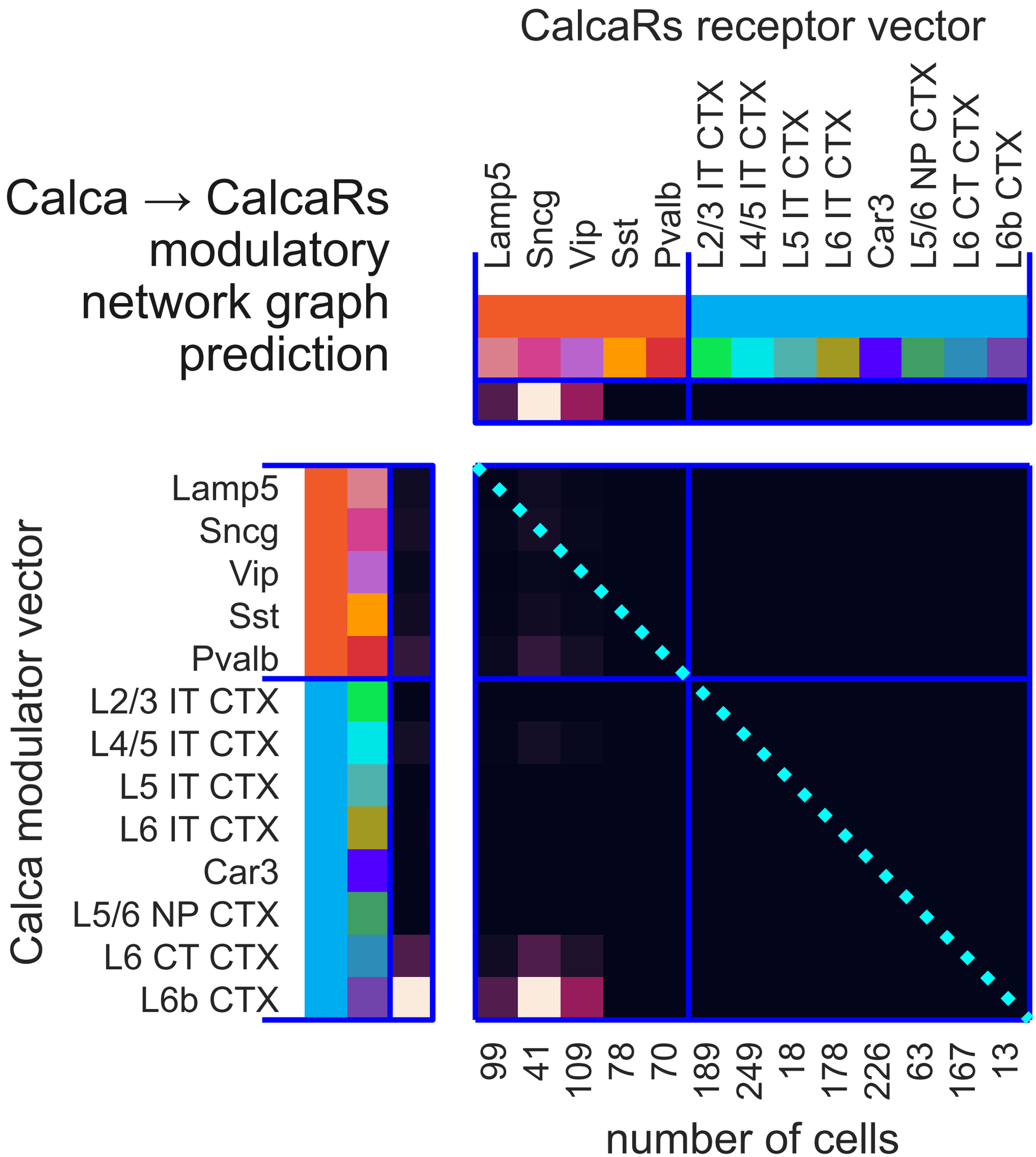
CalcaRs vector
max: 0.69%
mean: 0.07%

Calca vector
max: 15.89%
mean: 3.13%

Calca x CalcaRs
outer product
max: 0.11%
mean: 0.00%

diagonal
max: 0.03%
mean: 0.00%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



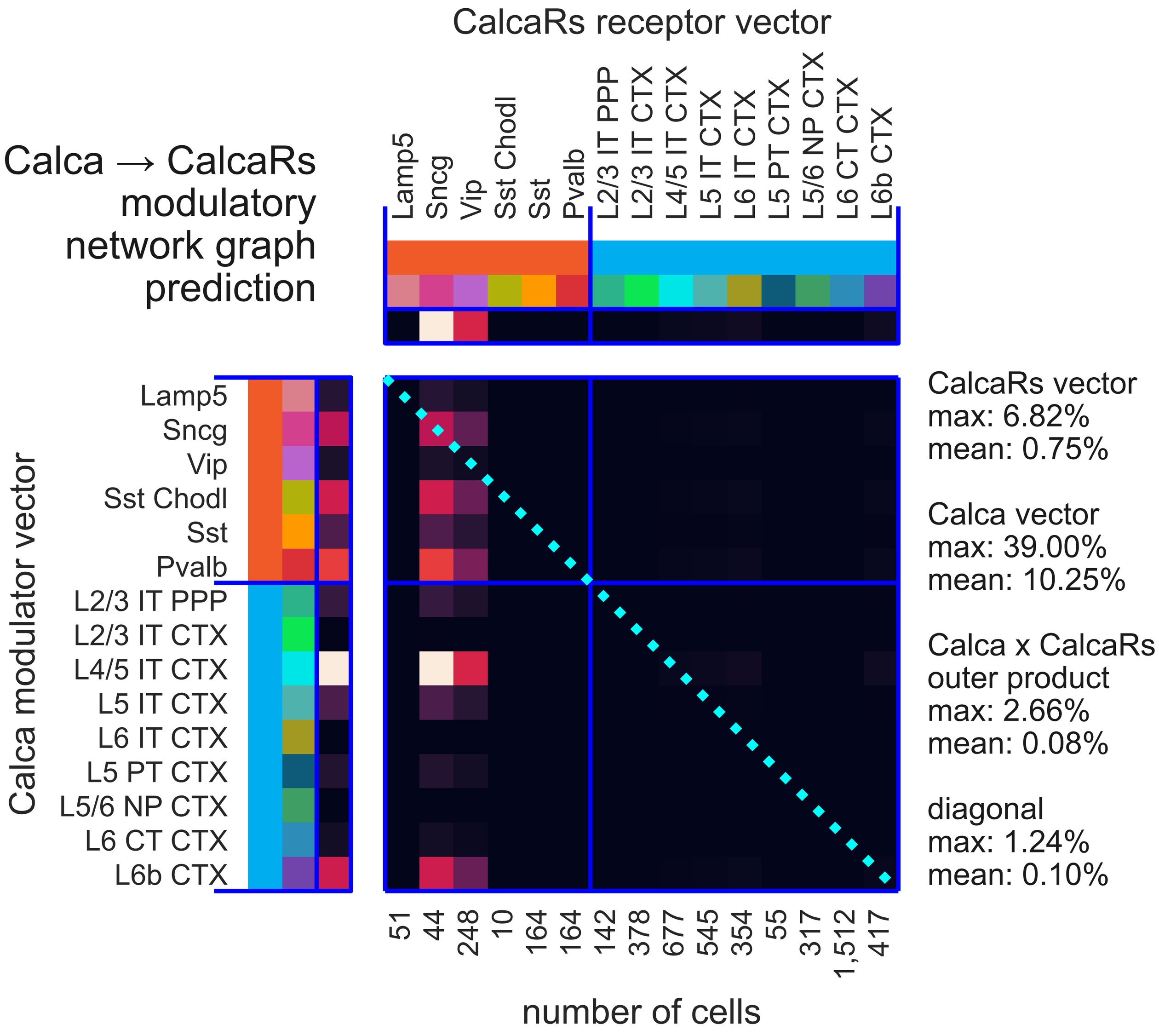
CalcaRs vector
max: 4.88%
mean: 0.59%

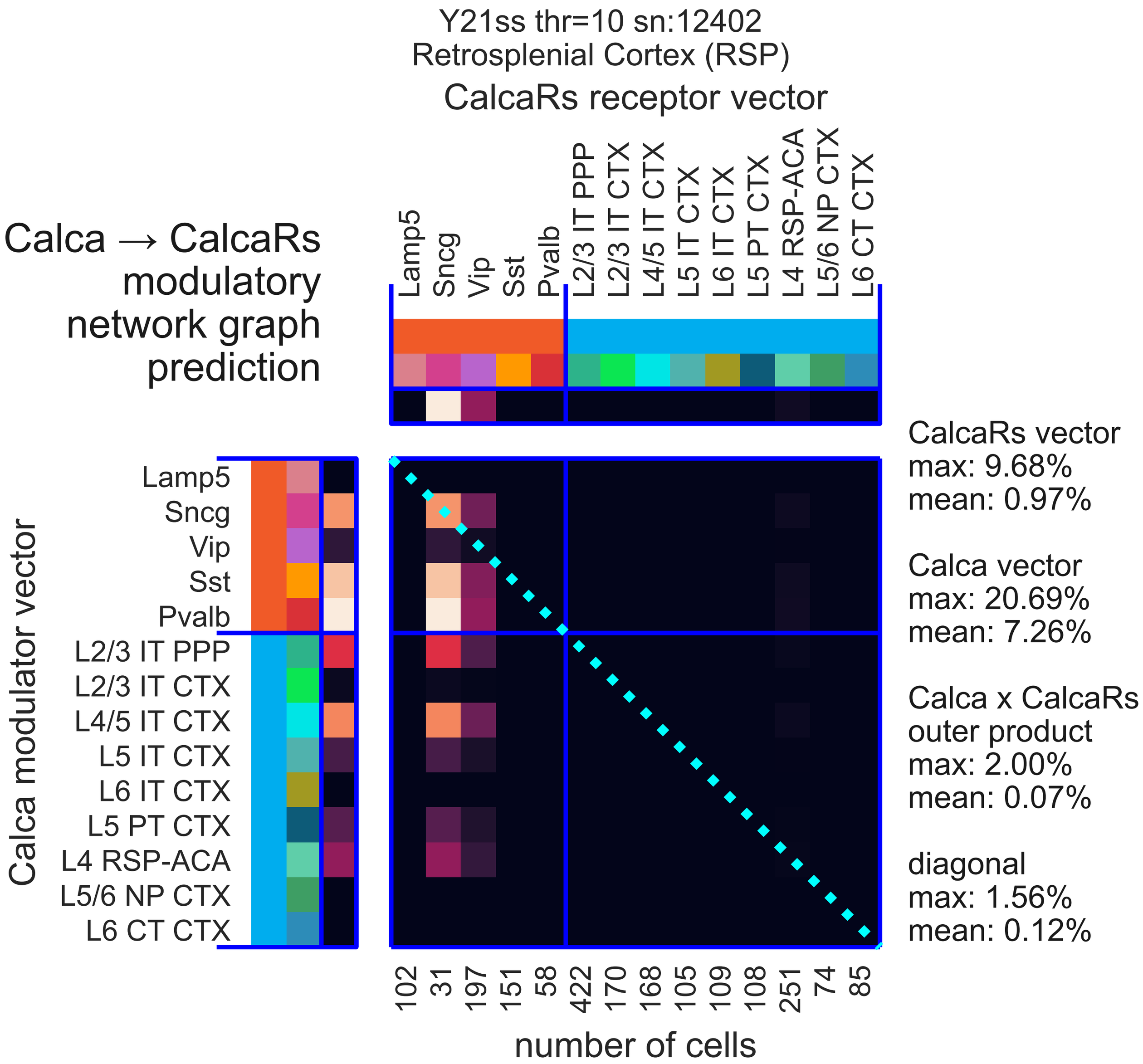
Calca vector
max: 84.62%
mean: 10.15%

Calca x CalcaRs
outer product
max: 4.13%
mean: 0.06%

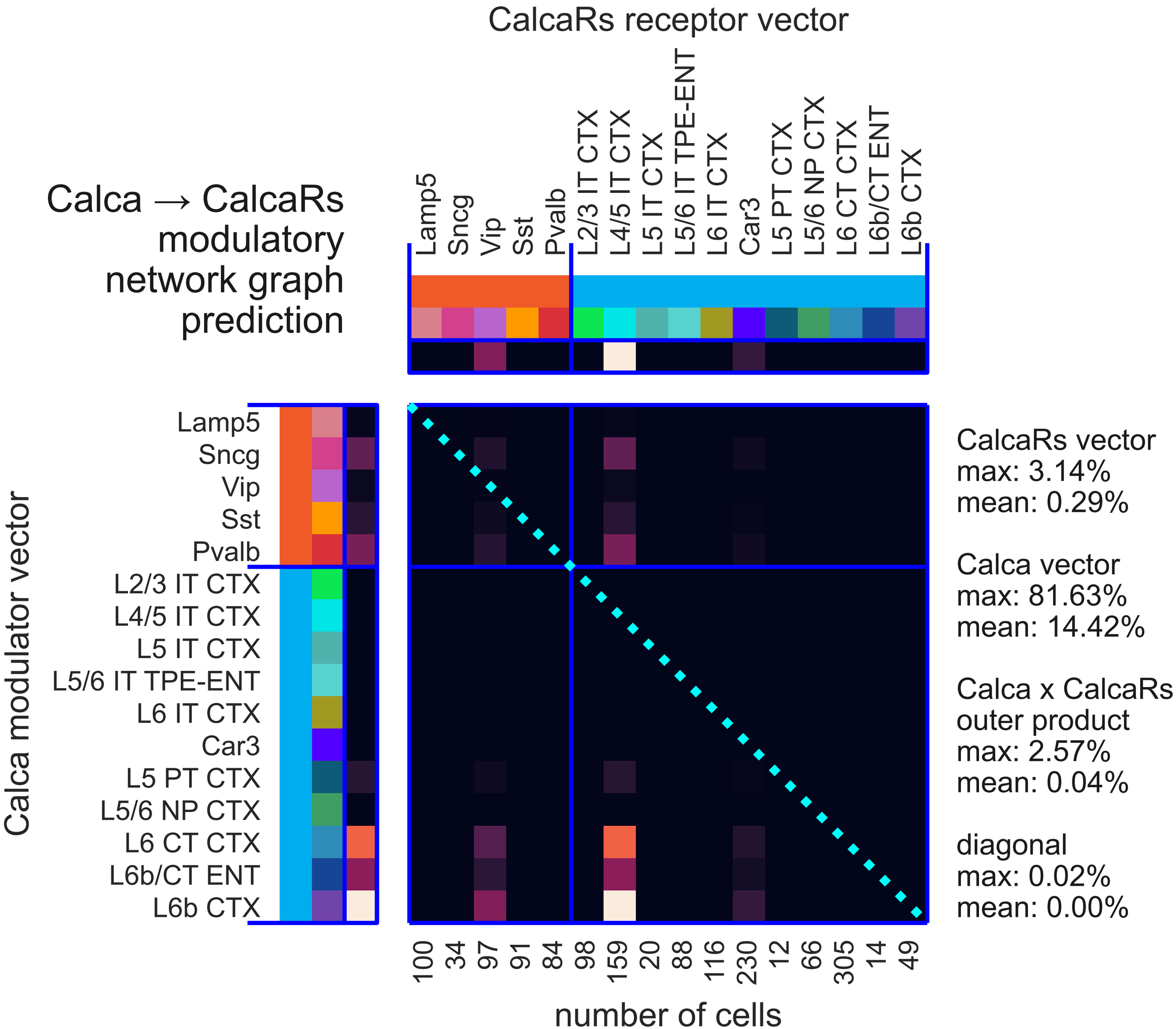
diagonal
max: 0.24%
mean: 0.02%

Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

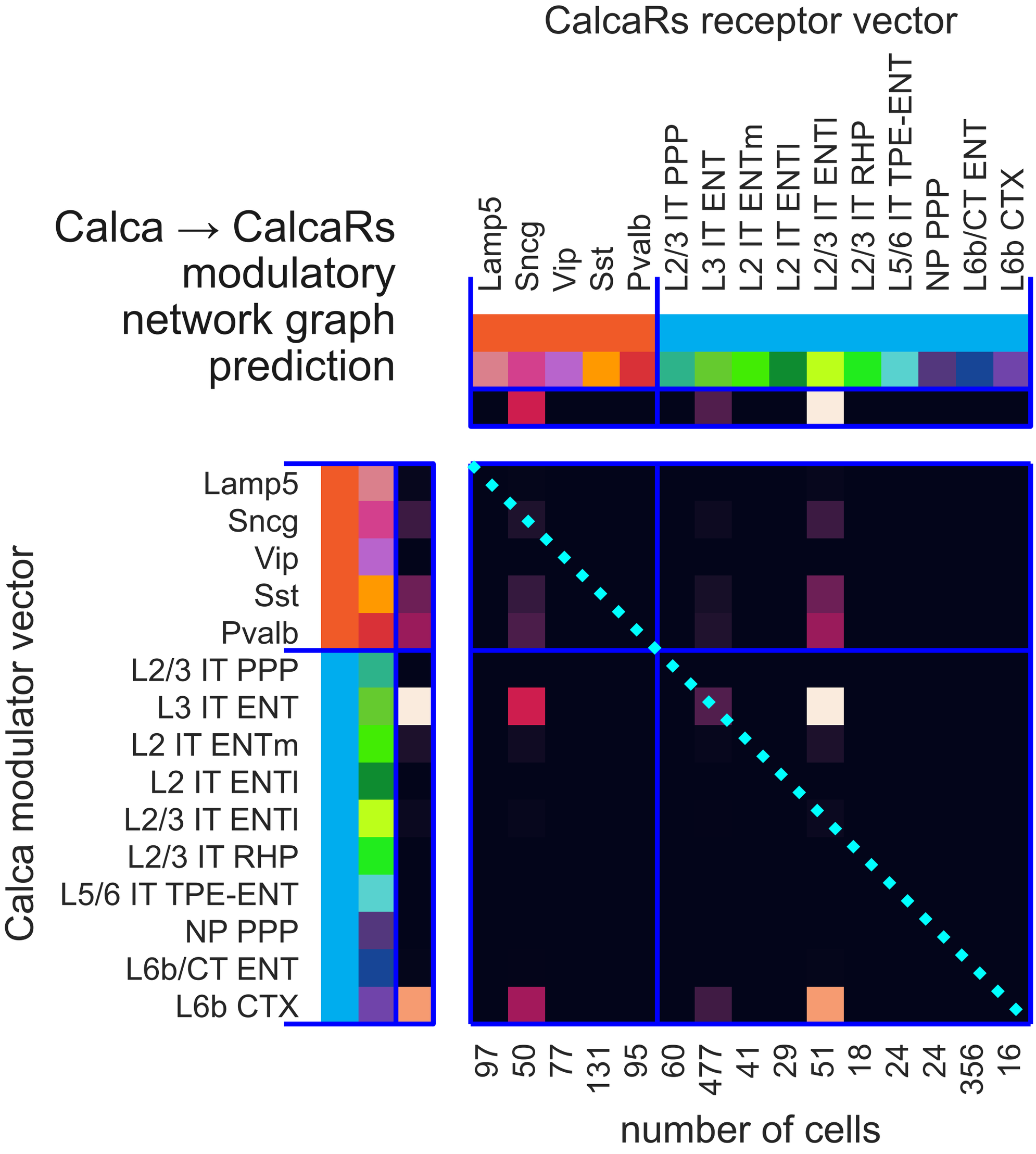



Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
CalcaRs receptor vector
Calca → CalcaRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Calca modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
CalcaRs vector
max: 9.68%
mean: 0.97%
Calca vector
max: 20.69%
mean: 7.26%
Calca x CalcaRs
outer product
max: 2.00%
mean: 0.07%
diagonal
max: 1.56%
mean: 0.12%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)



Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

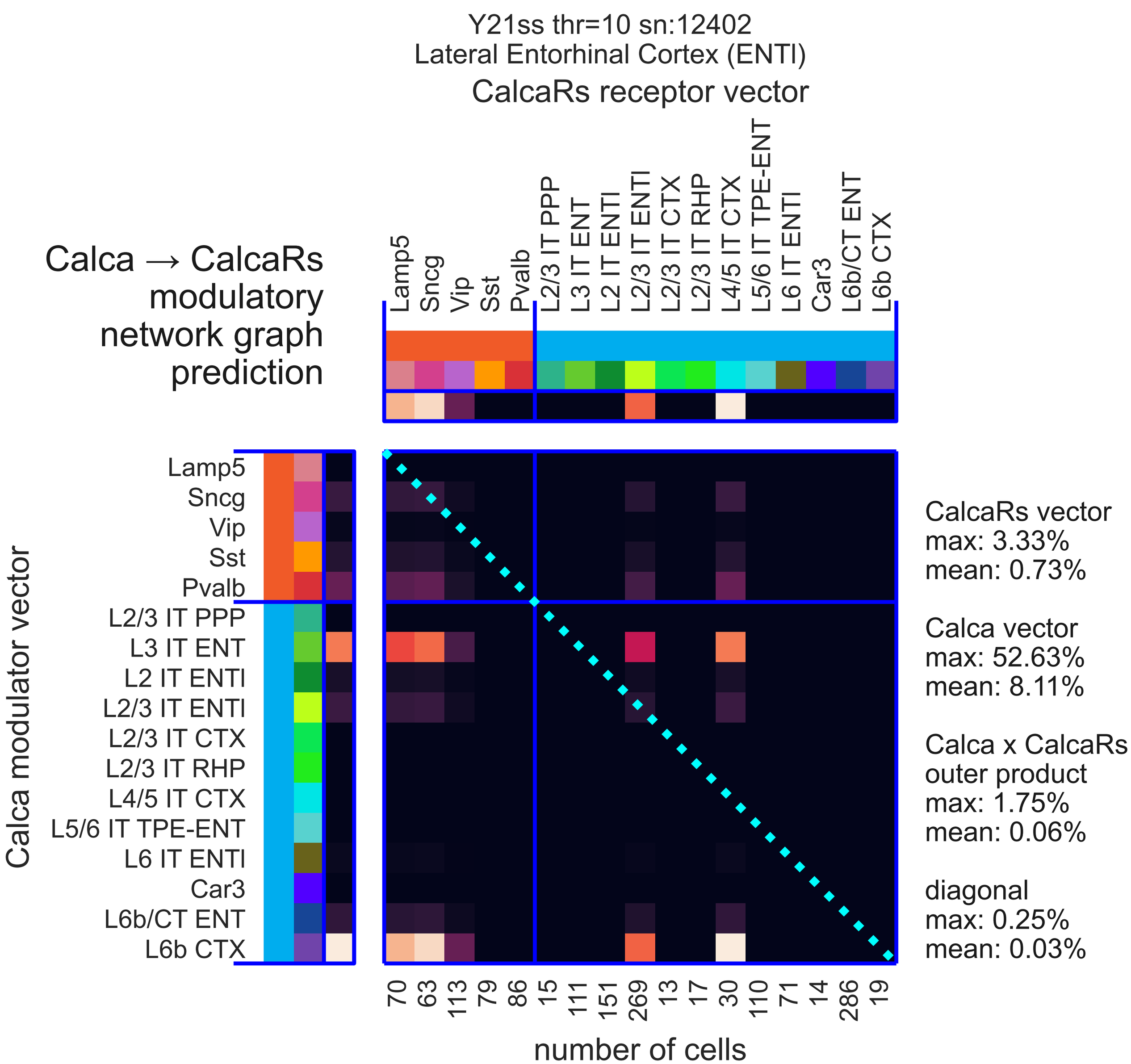


CalcaRs vector
max: 3.92%
mean: 0.45%

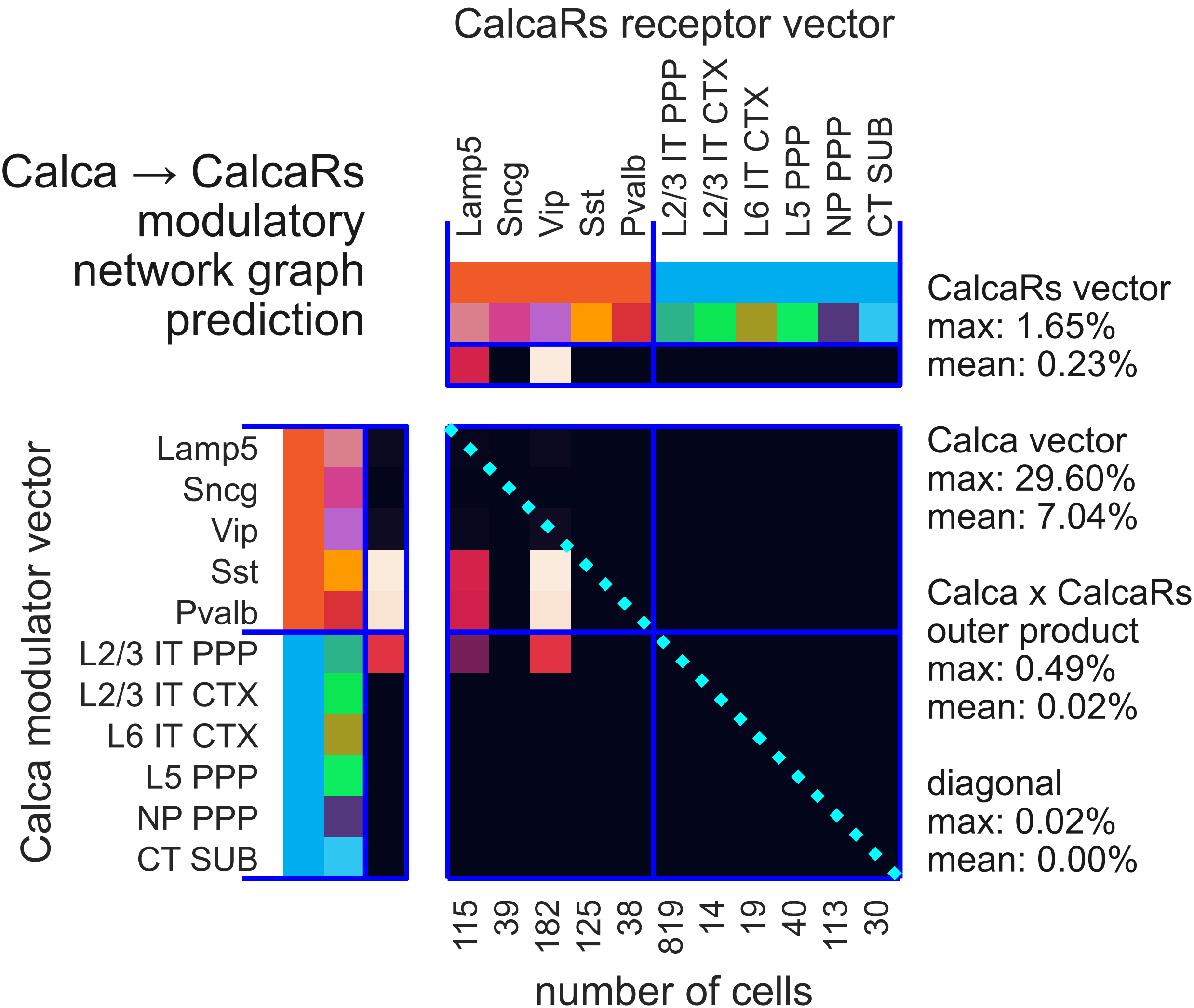
Calca vector
max: 62.89%
mean: 11.54%

Calca x CalcaRs
outer product
max: 2.47%
mean: 0.05%

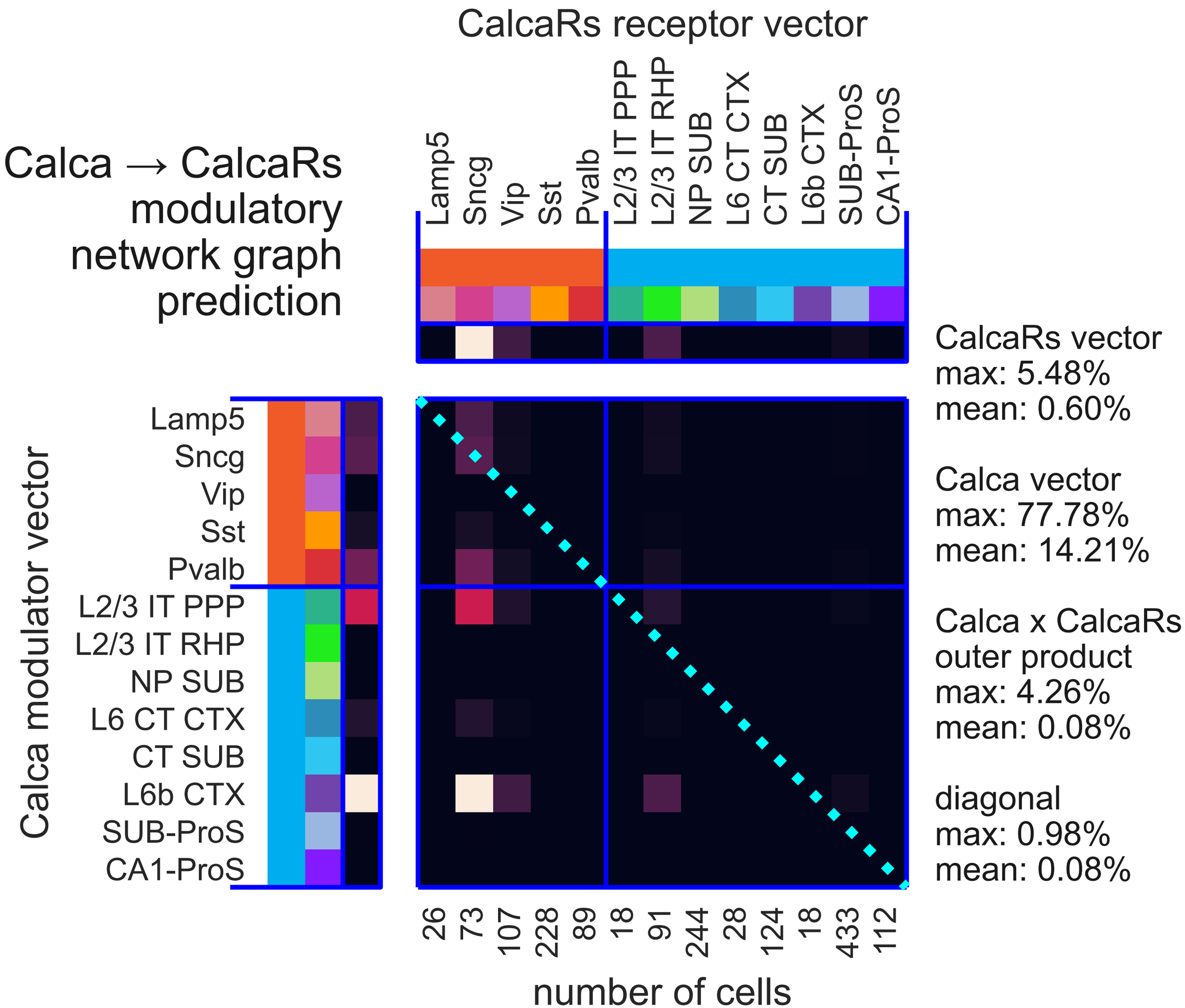
diagonal
max: 0.53%
mean: 0.05%


Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
CalcaRs receptor vector
Calca → CalcaRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Calca modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
CalcaRs vector
max: 3.33%
mean: 0.73%
Calca vector
max: 52.63%
mean: 8.11%
Calca x CalcaRs
outer product
max: 1.75%
mean: 0.06%
diagonal
max: 0.25%
mean: 0.03%

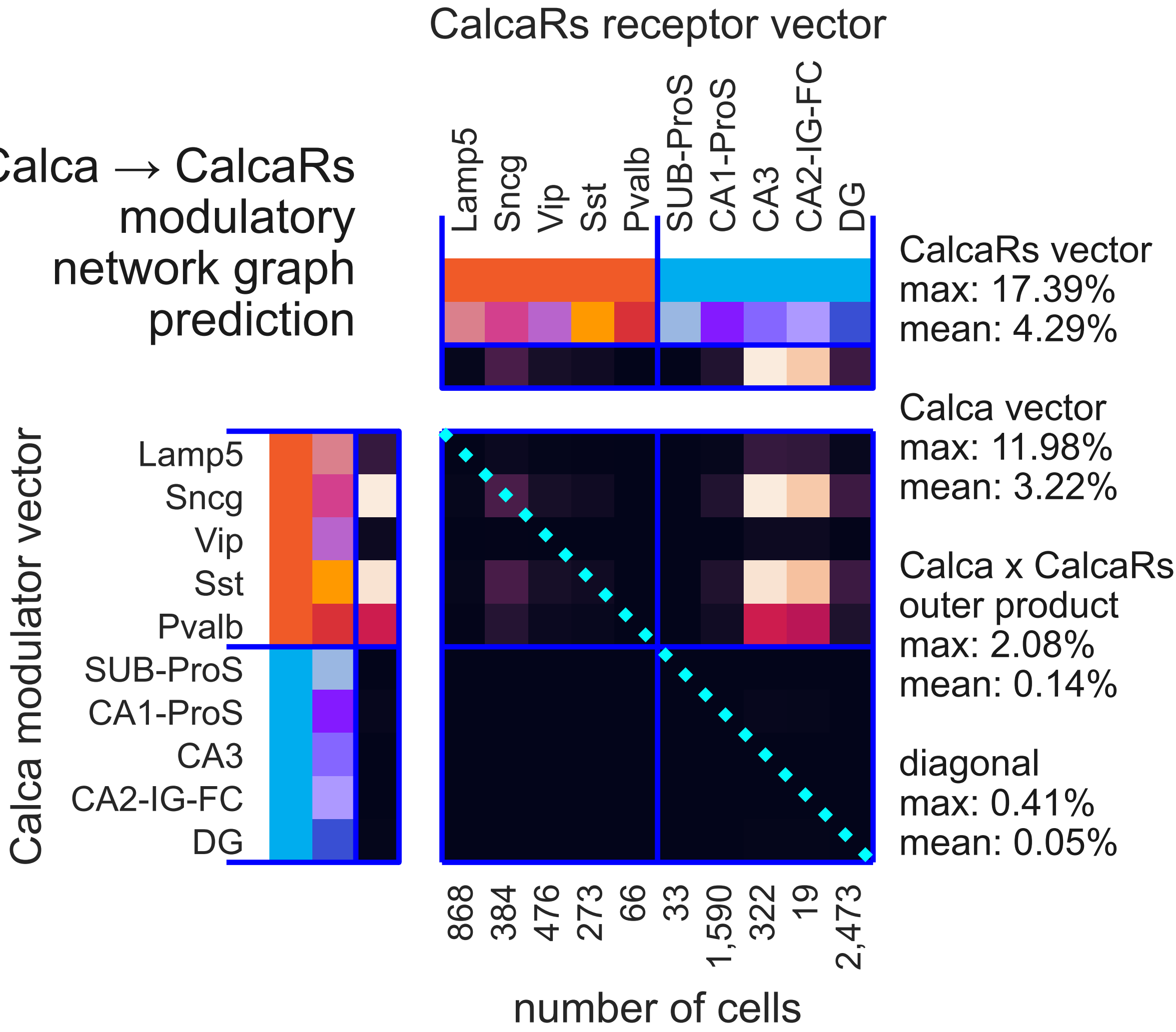
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

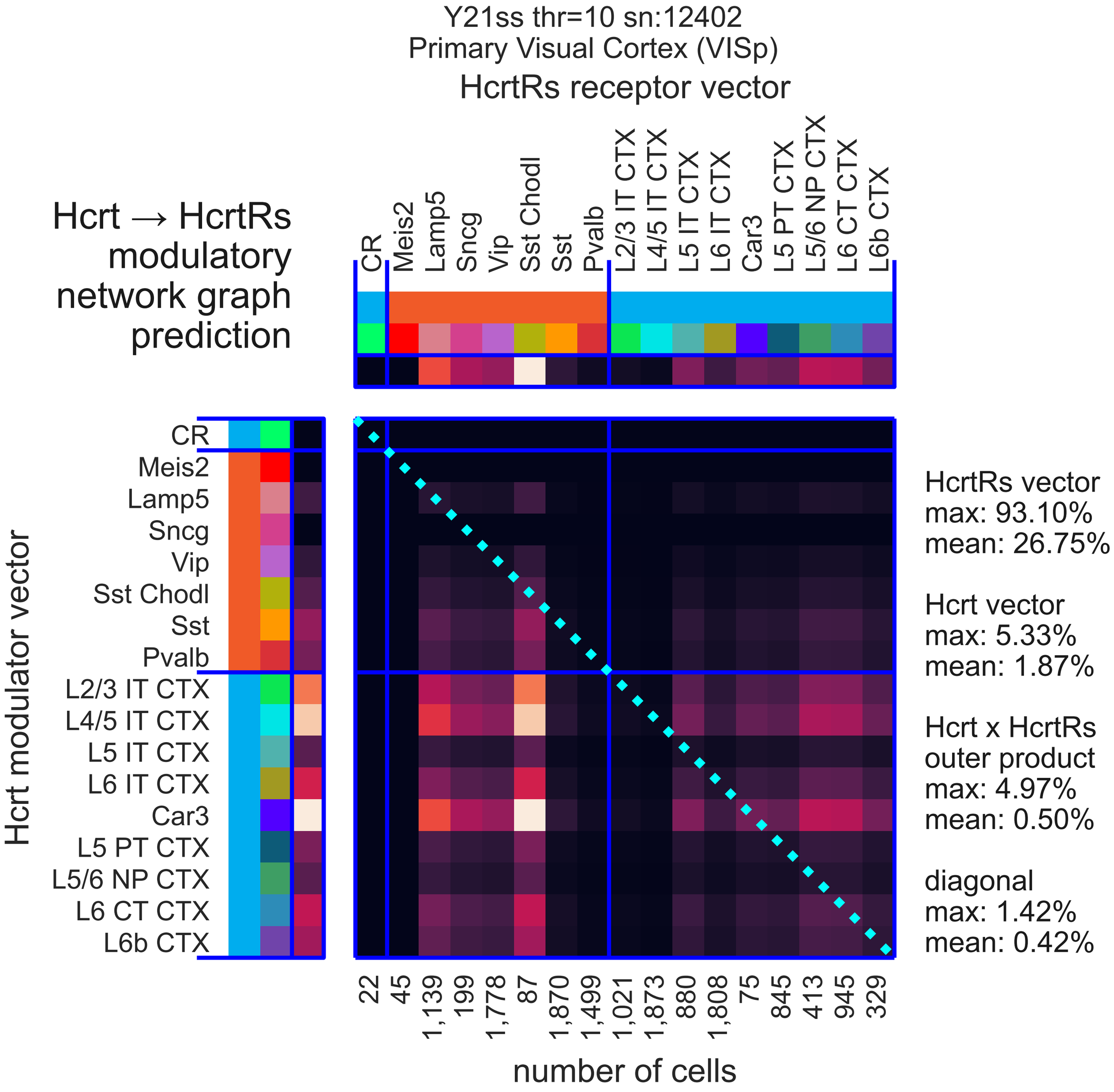


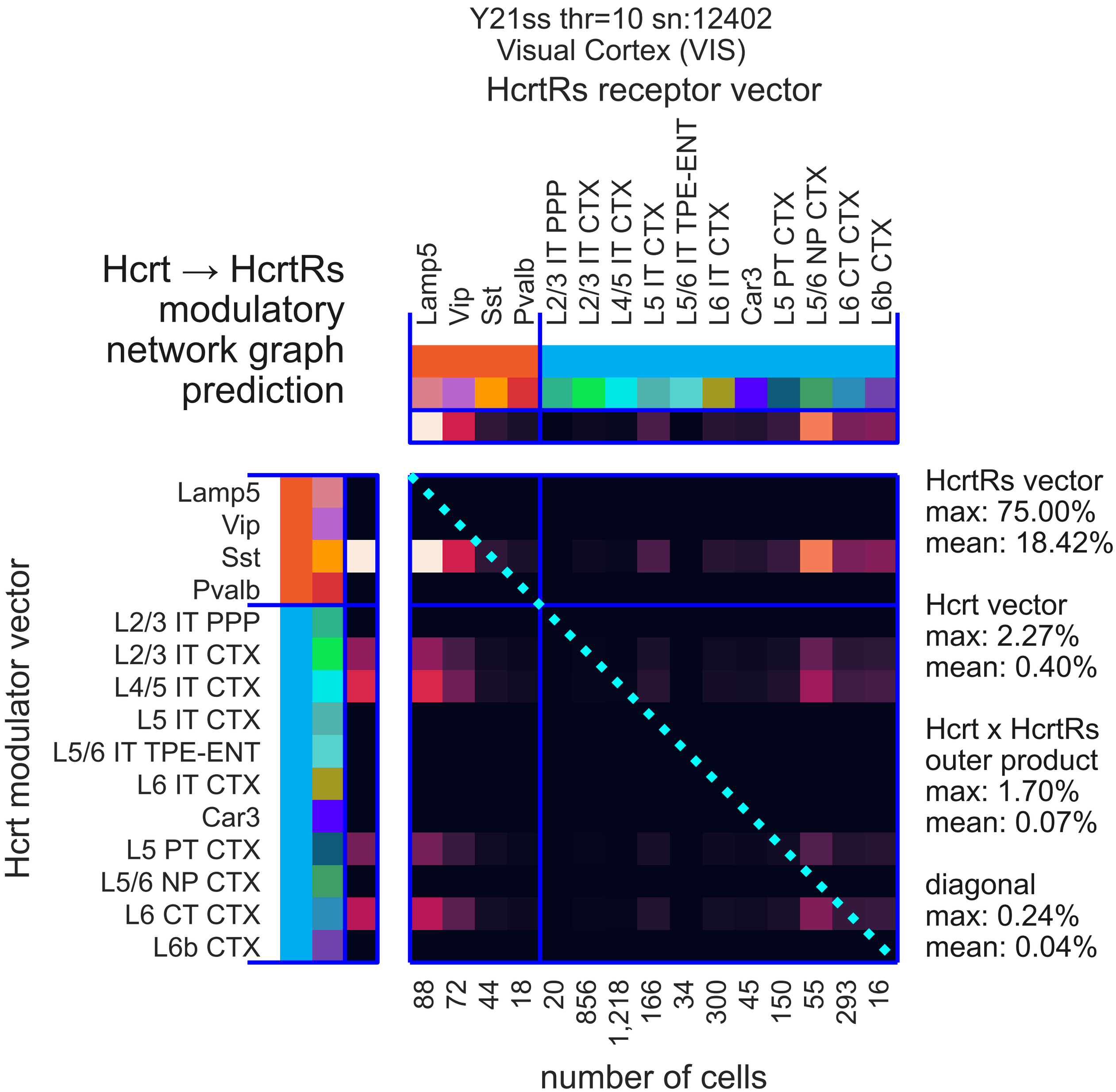
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



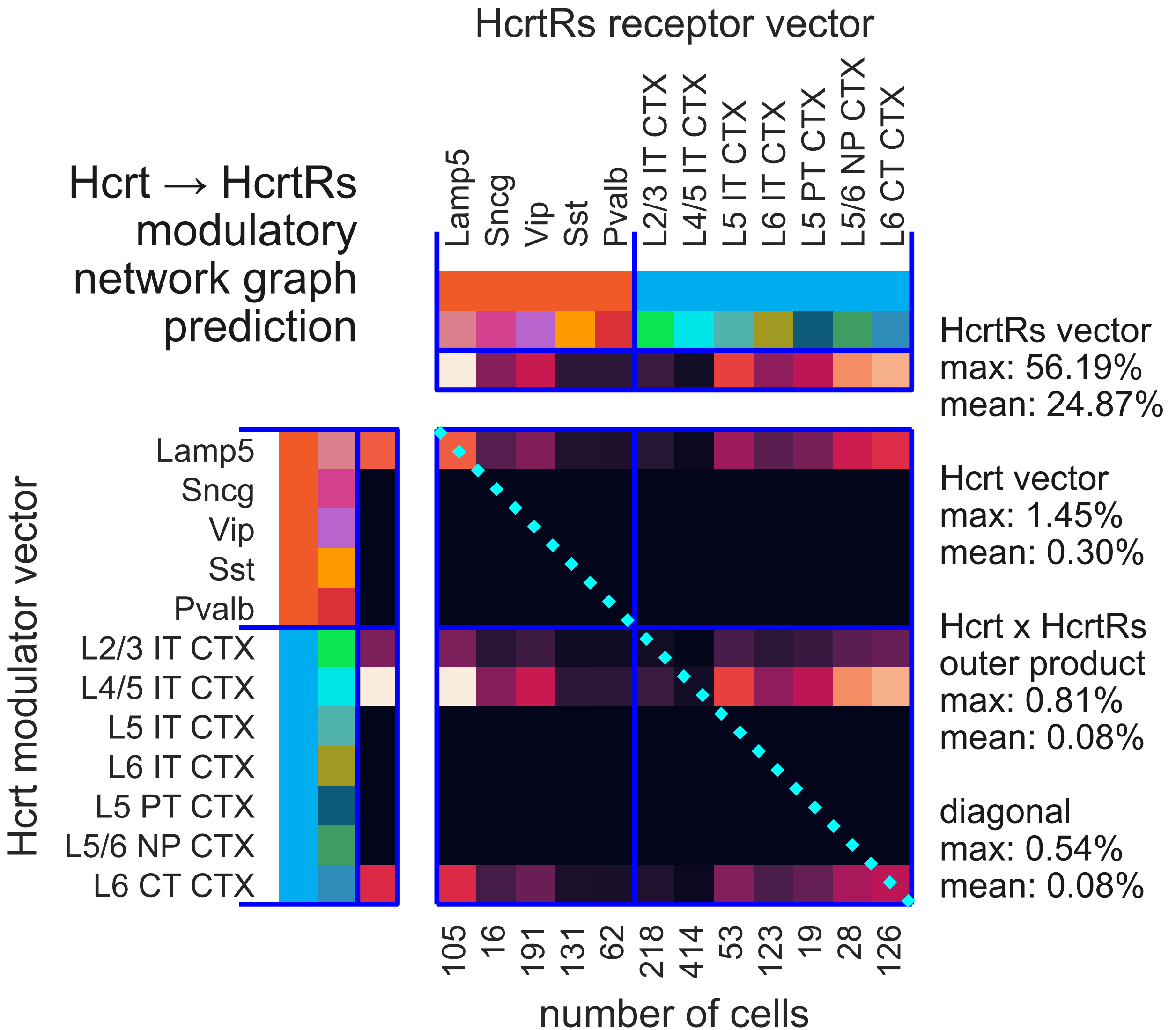
Y21ss thr=10 sn:12402
Hippocampus (HIP)



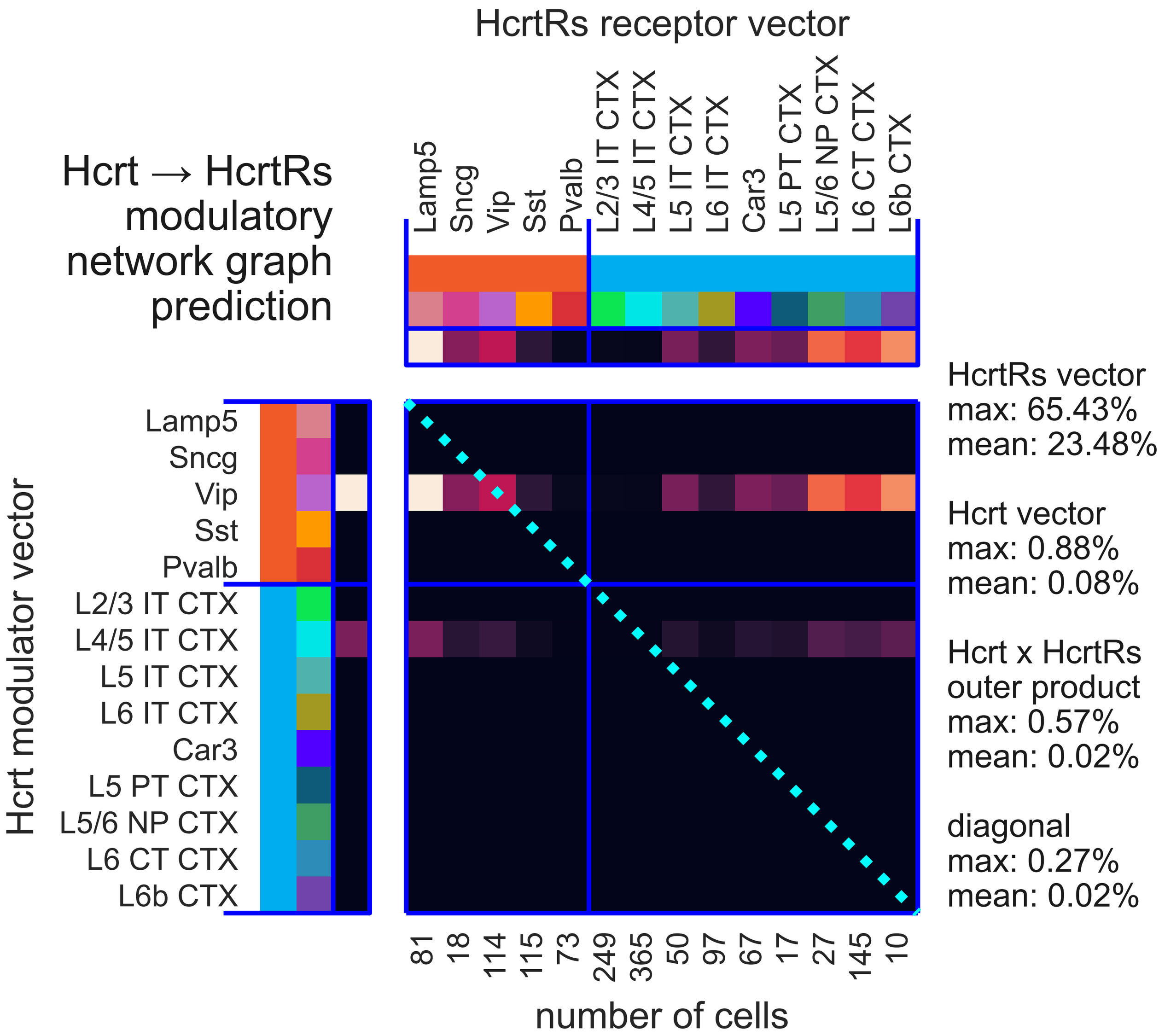

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
HcrtRs receptor vector
Hcrt → HcrtRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Hcrt modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
HcrtRs vector
max: 93.10%
mean: 26.75%
Hcrt vector
max: 5.33%
mean: 1.87%
Hcrt x HcrtRs
outer product
max: 4.97%
mean: 0.50%
diagonal
max: 1.42%
mean: 0.42%


Y21ss thr=10 sn:12402
Visual Cortex (VIS)
HcrtRs receptor vector
Hcrt → HcrtRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Hcrt modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
HcrtRs vector
max: 75.00%
mean: 18.42%
Hcrt vector
max: 2.27%
mean: 0.40%
Hcrt x HcrtRs
outer product
max: 1.70%
mean: 0.07%
diagonal
max: 0.24%
mean: 0.04%

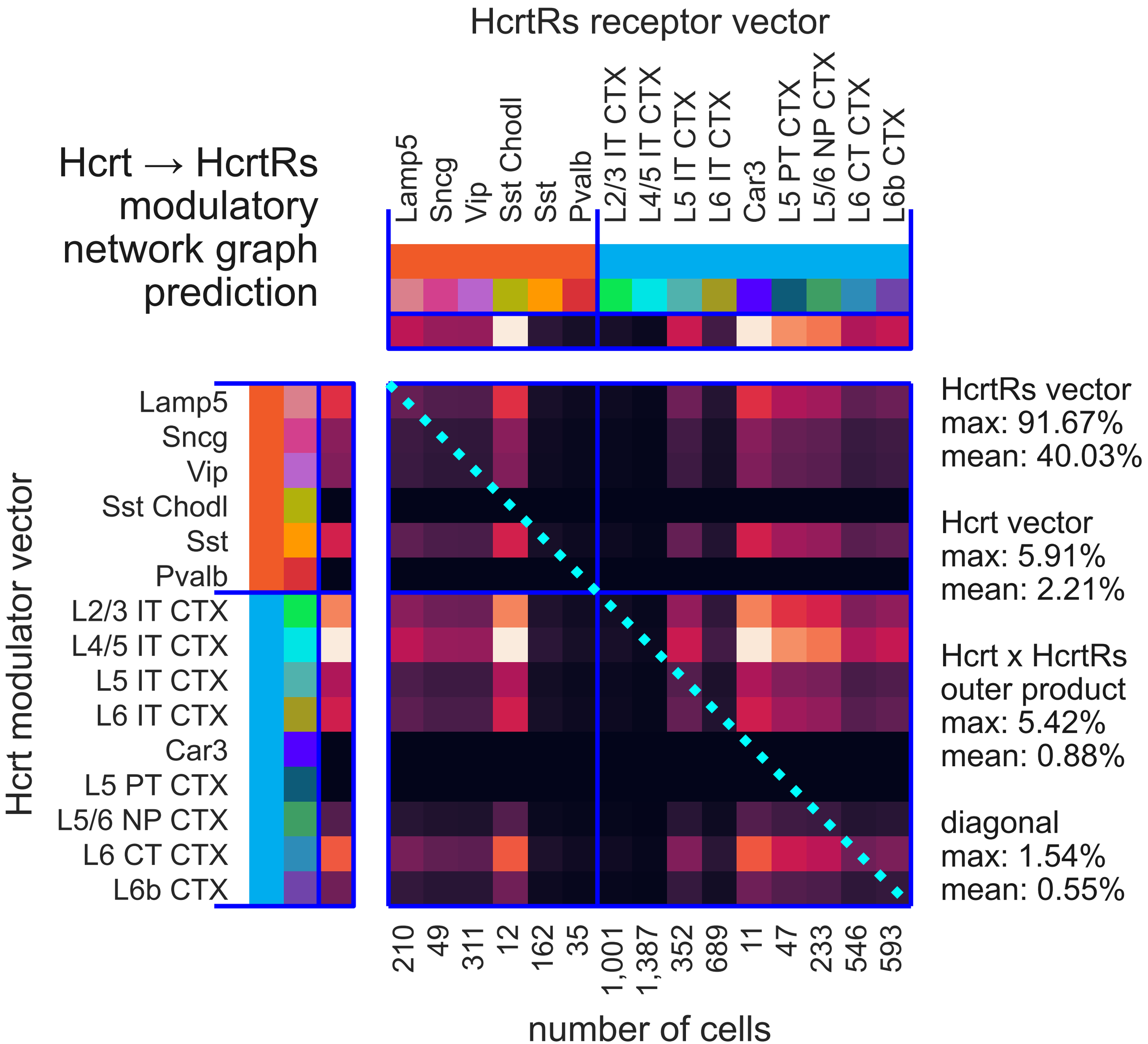
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)

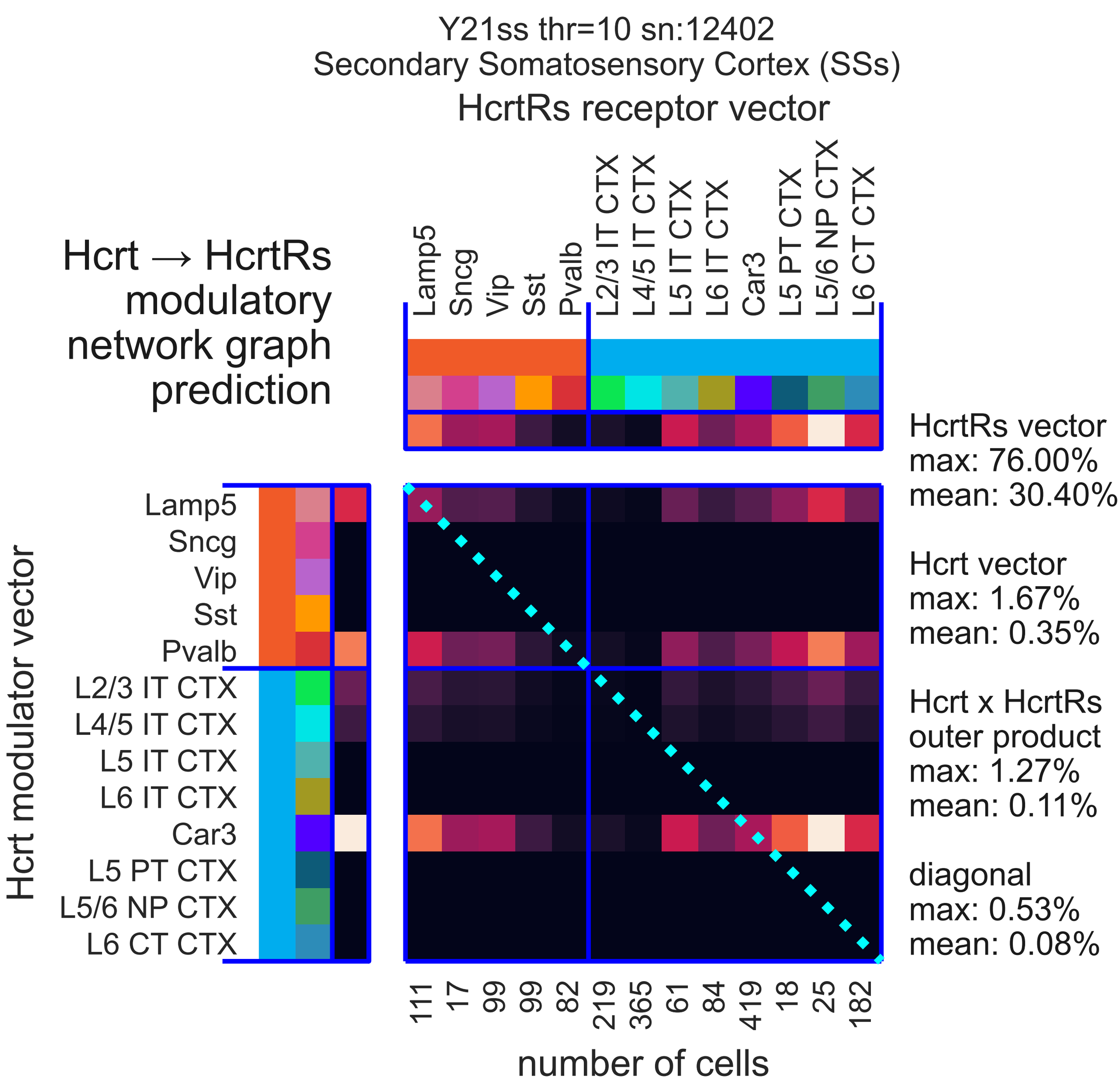


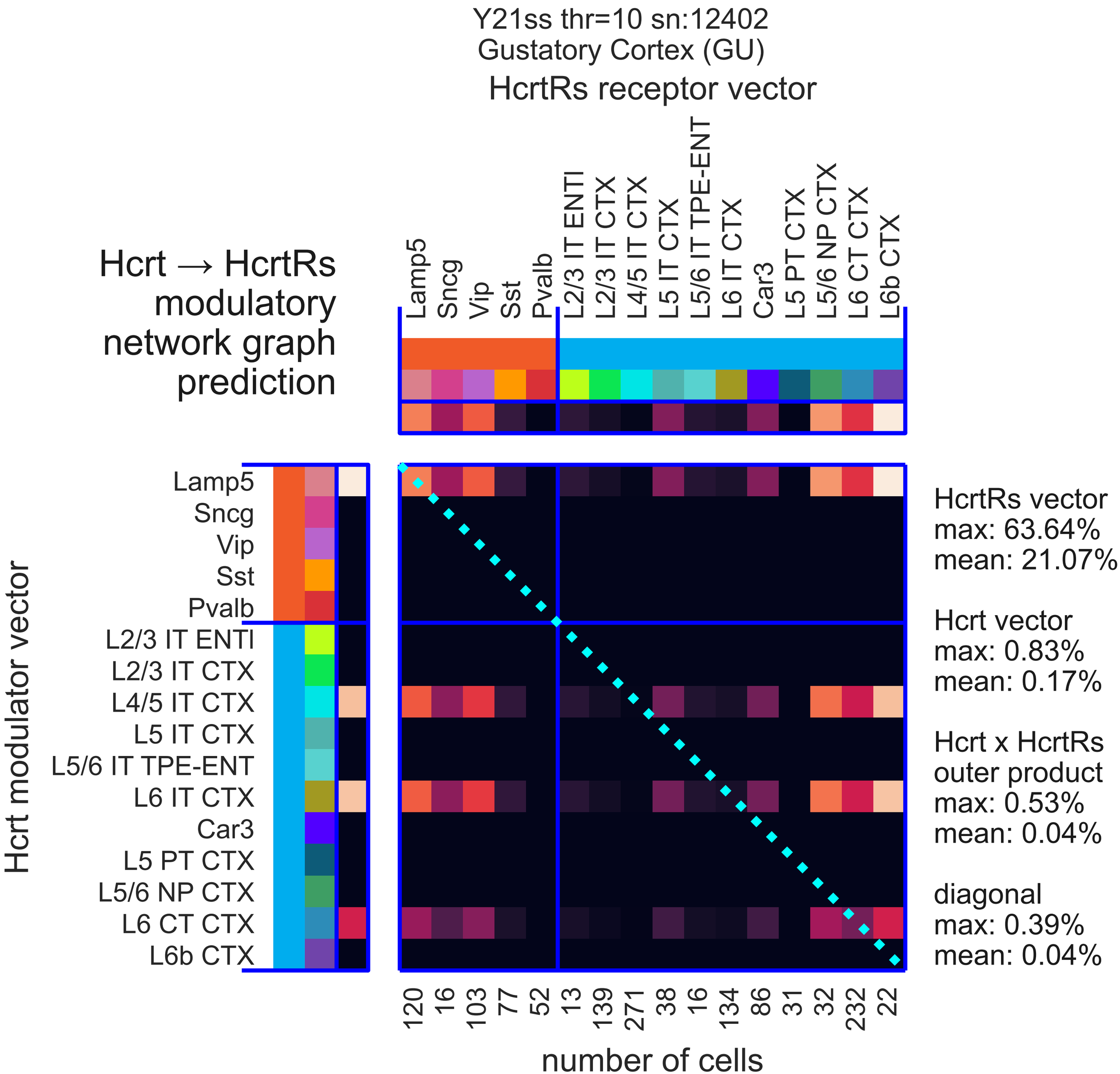
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

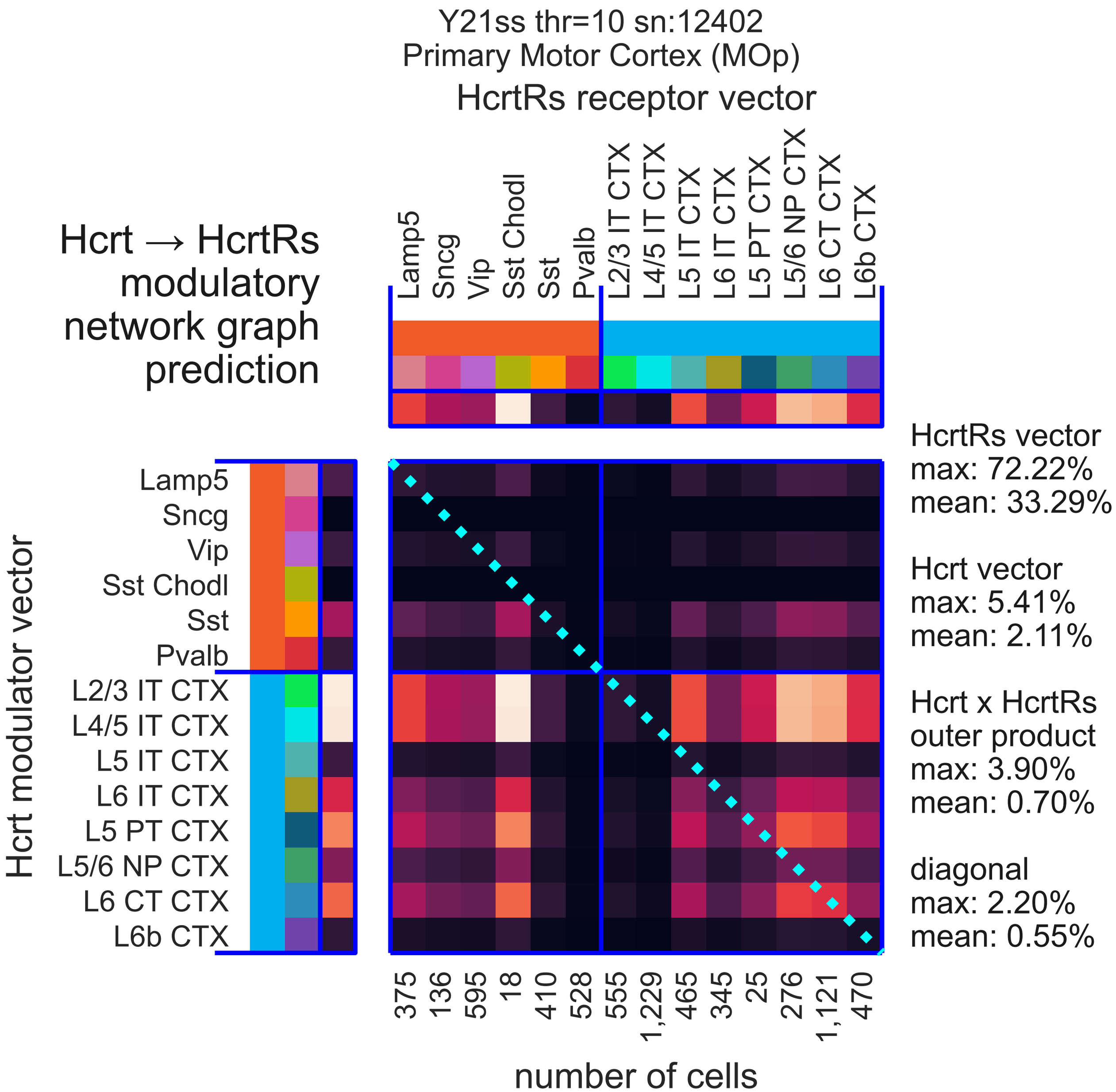


Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

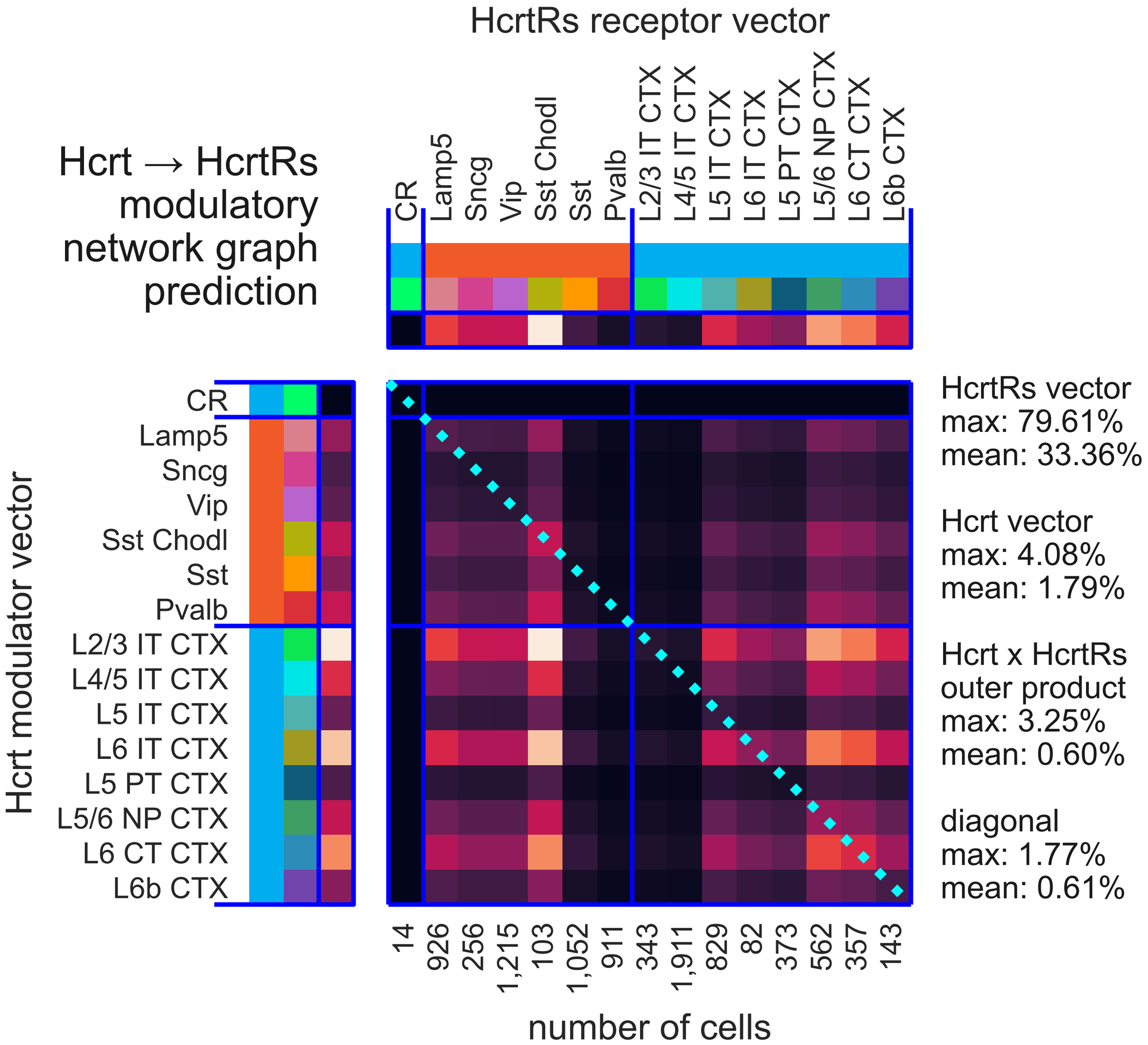



Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)
HcrtRs receptor vector
Hcrt → HcrtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
HcrtRs vector
max: 76.00%
mean: 30.40%
Hcrt vector
max: 1.67%
mean: 0.35%
Hcrt x HcrtRs
outer product
max: 1.27%
mean: 0.11%
diagonal
max: 0.53%
mean: 0.08%
Hcrt modulator vector
111
17
99
99
82
219
365
61
84
419
18
25
182
number of cells

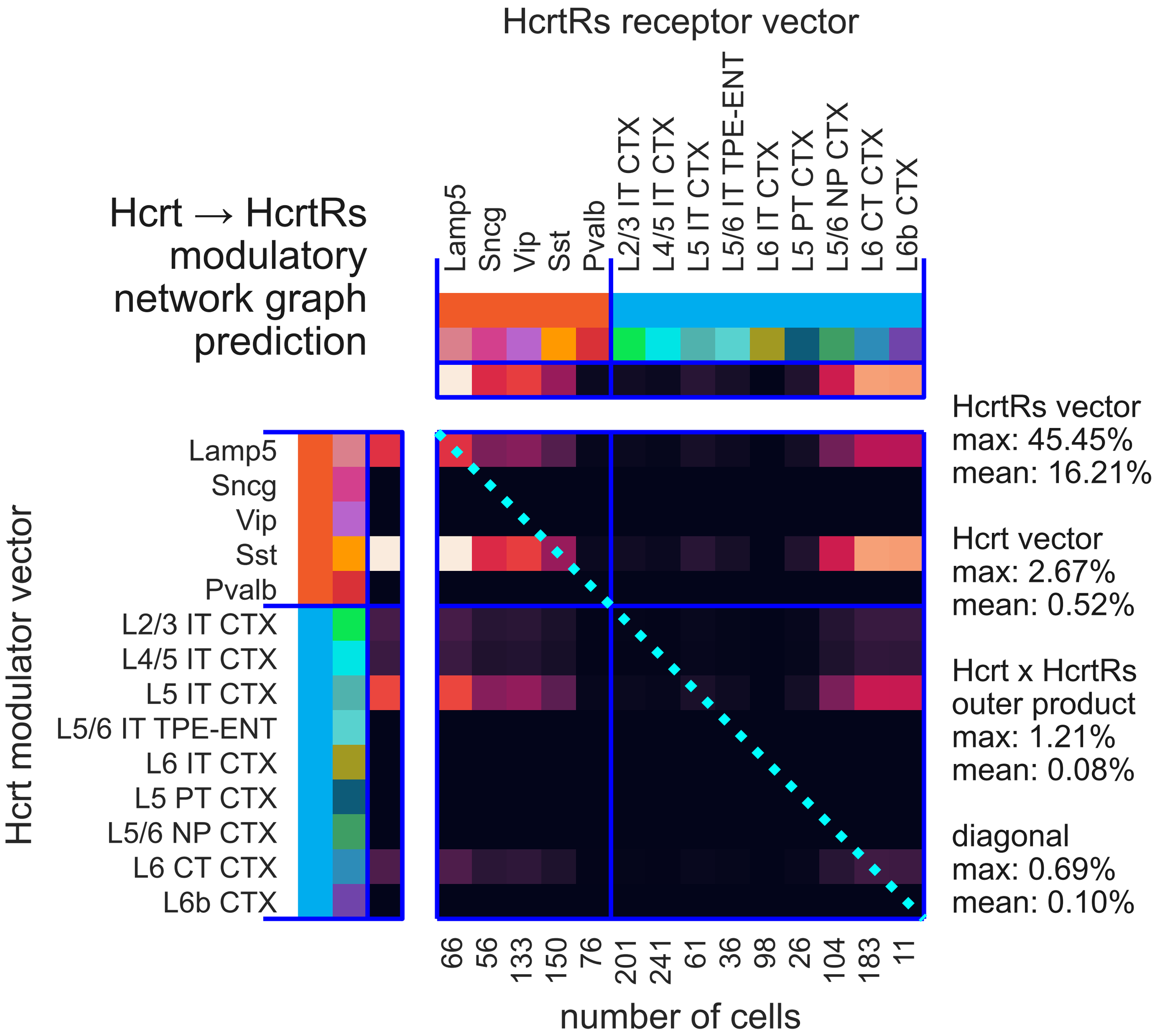

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
HcrtRs receptor vector
Hcrt → HcrtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Hcrt modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
HcrtRs vector
max: 63.64%
mean: 21.07%
Hcrt vector
max: 0.83%
mean: 0.17%
Hcrt x HcrtRs
outer product
max: 0.53%
mean: 0.04%
diagonal
max: 0.39%
mean: 0.04%

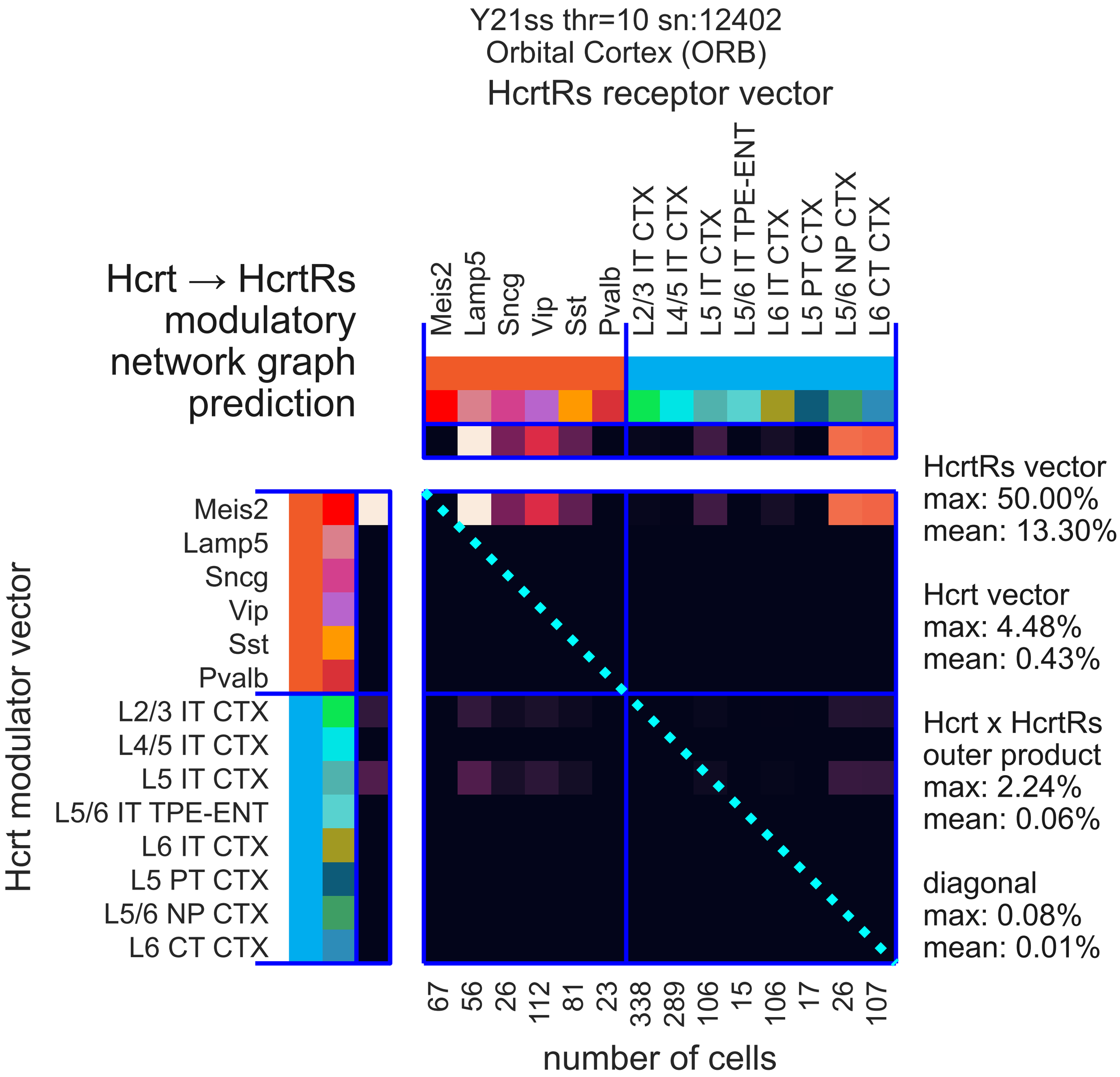

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
HcrtRs receptor vector
Hcrt → HcrtRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Hcrt modulator vector
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells
HcrtRs vector
max: 72.22%
mean: 33.29%
Hcrt vector
max: 5.41%
mean: 2.11%
Hcrt x HcrtRs
outer product
max: 3.90%
mean: 0.70%
diagonal
max: 2.20%
mean: 0.55%

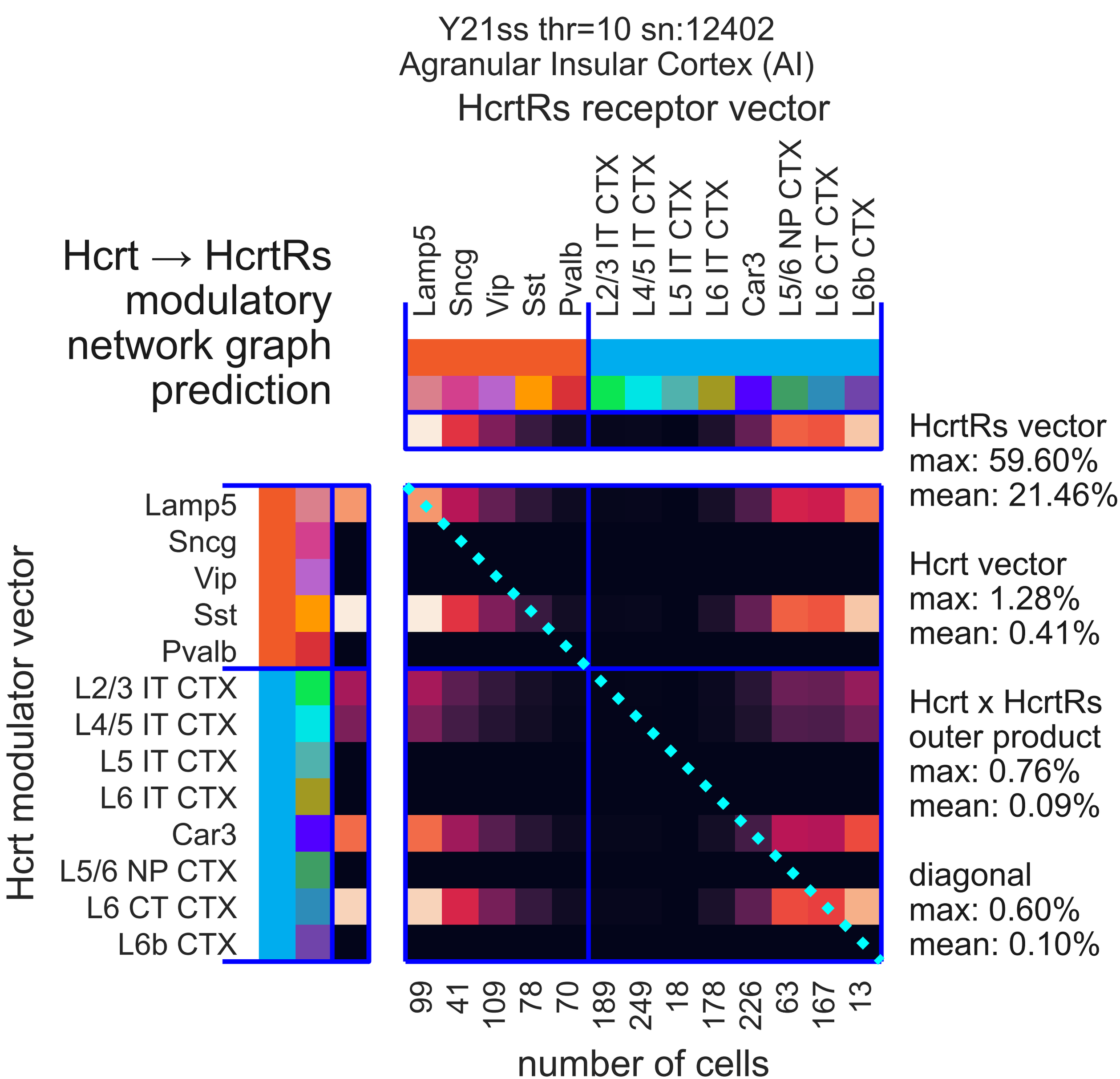
Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



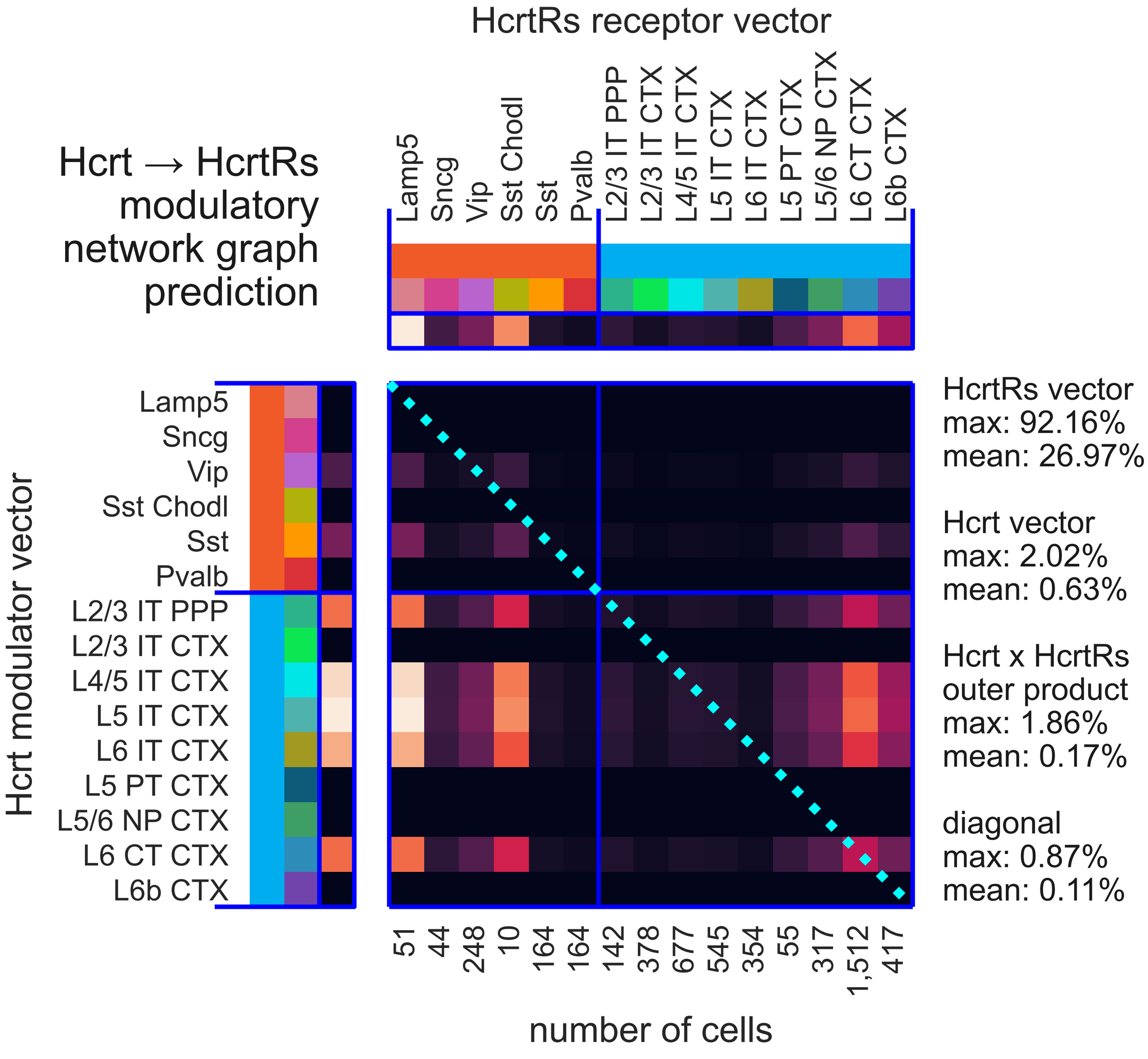
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

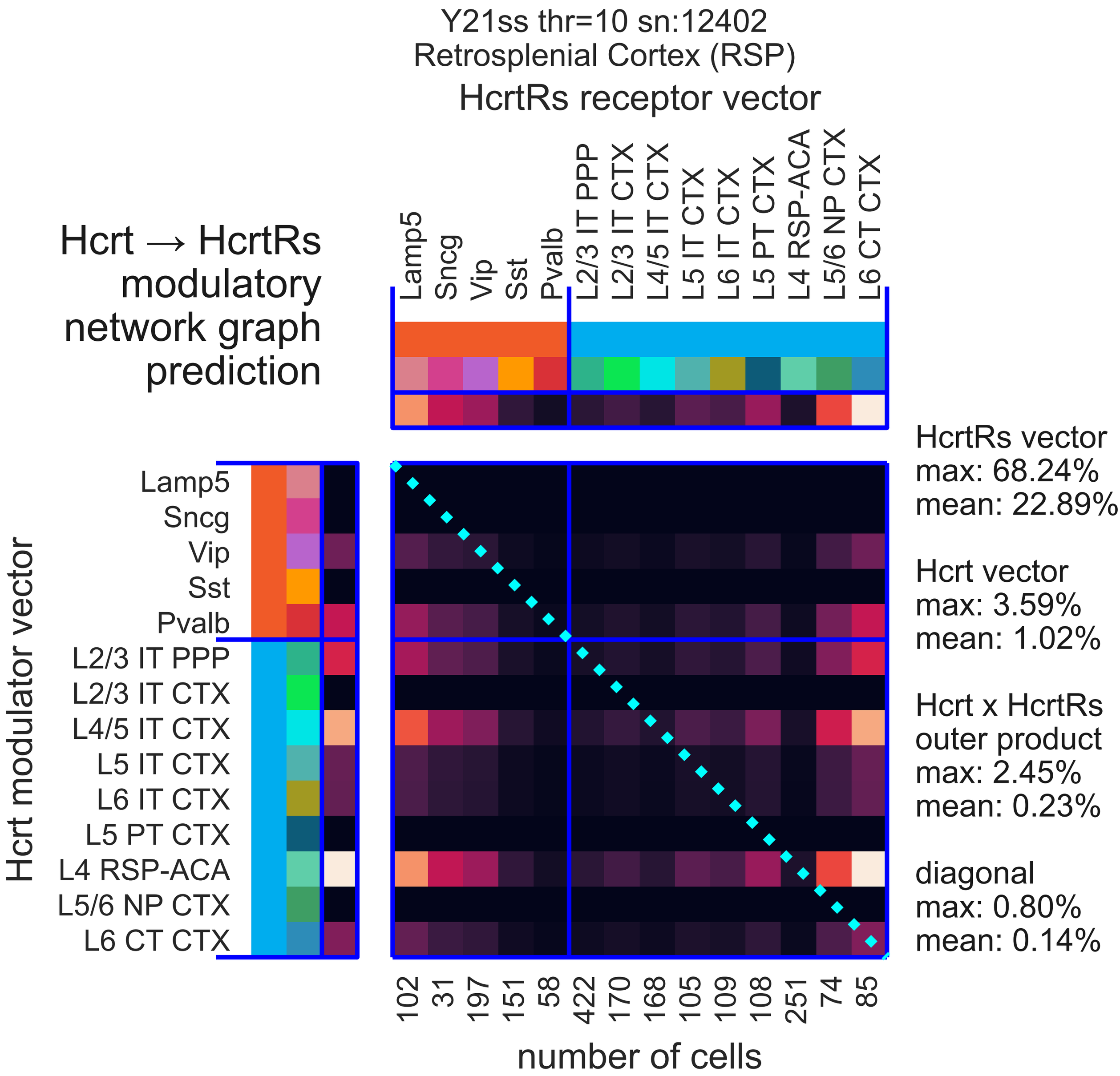



Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
HcrtRs receptor vector
Hcrt → HcrtRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Hcrt modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
HcrtRs vector
max: 50.00%
mean: 13.30%
Hcrt vector
max: 4.48%
mean: 0.43%
Hcrt x HcrtRs
outer product
max: 2.24%
mean: 0.06%
diagonal
max: 0.08%
mean: 0.01%

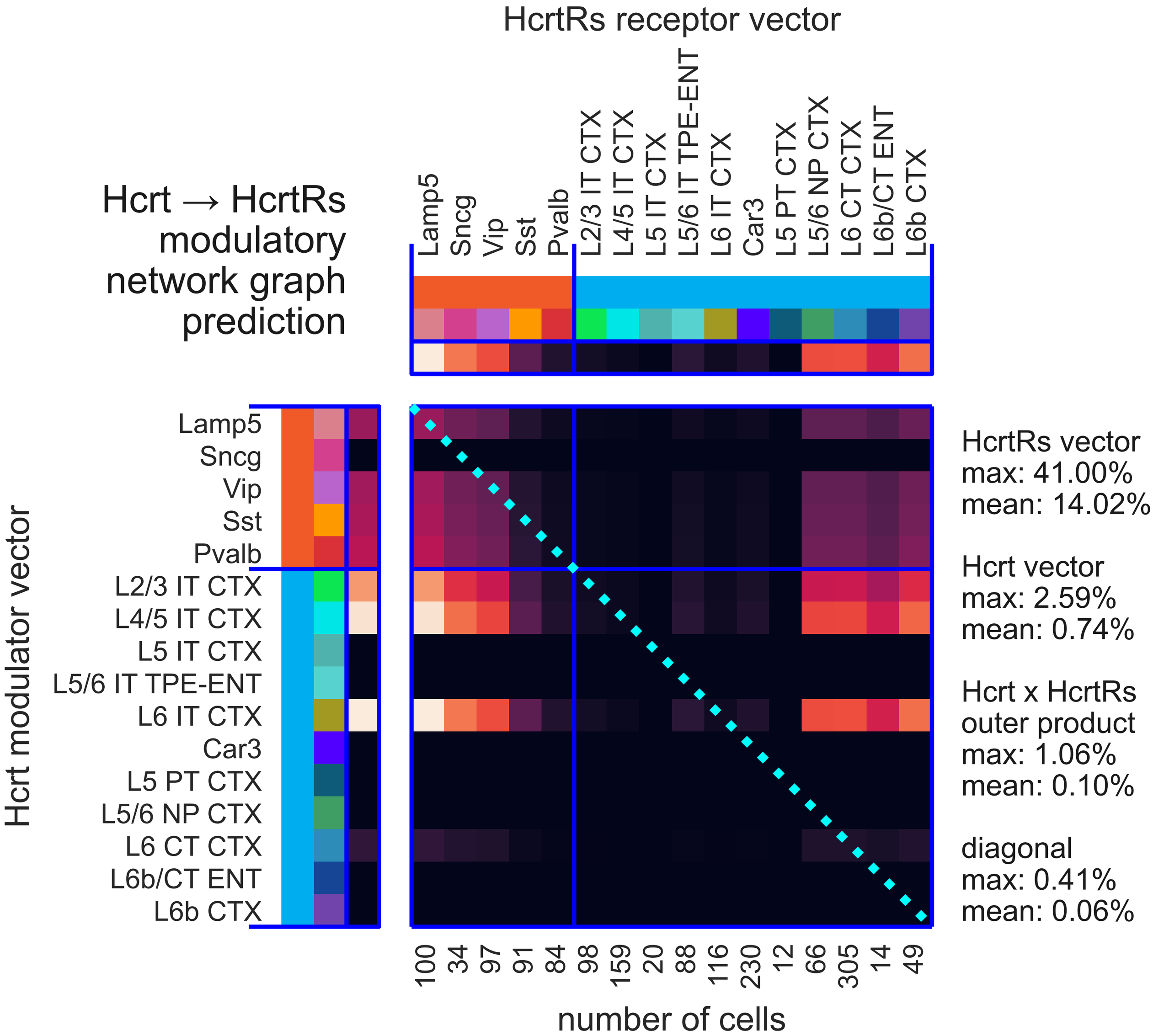

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)
HcrtRs receptor vector
Hcrt → HcrtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5/6 NP CTX
L6 CT CTX
L6b CTX
HcrtRs vector
max: 59.60%
mean: 21.46%
Hcrt vector
max: 1.28%
mean: 0.41%
Hcrt x HcrtRs
outer product
max: 0.76%
mean: 0.09%
diagonal
max: 0.60%
mean: 0.10%
Hcrt modulator vector
99
41
109
78
70
189
249
18
178
226
63
167
13
number of cells

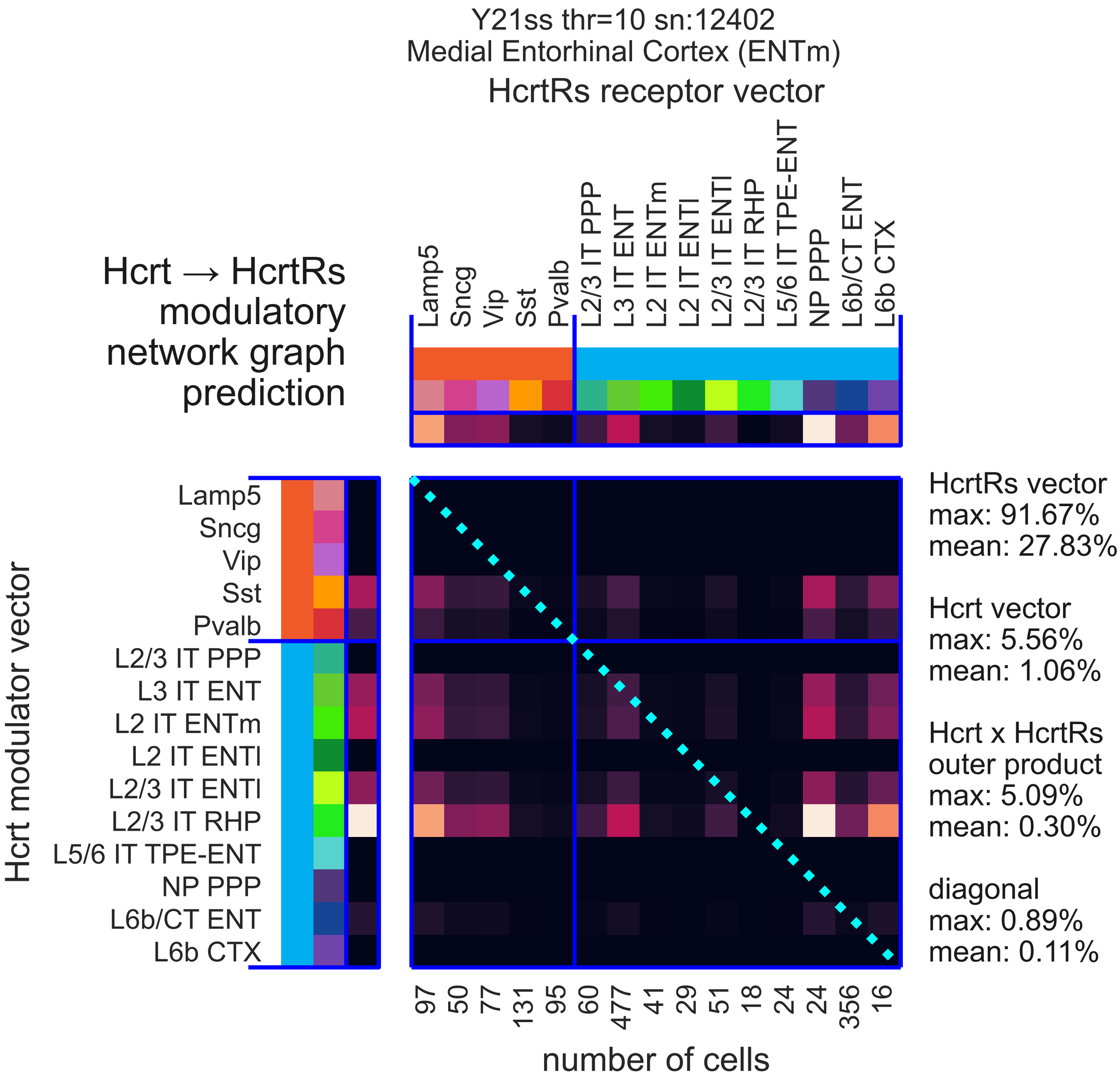
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

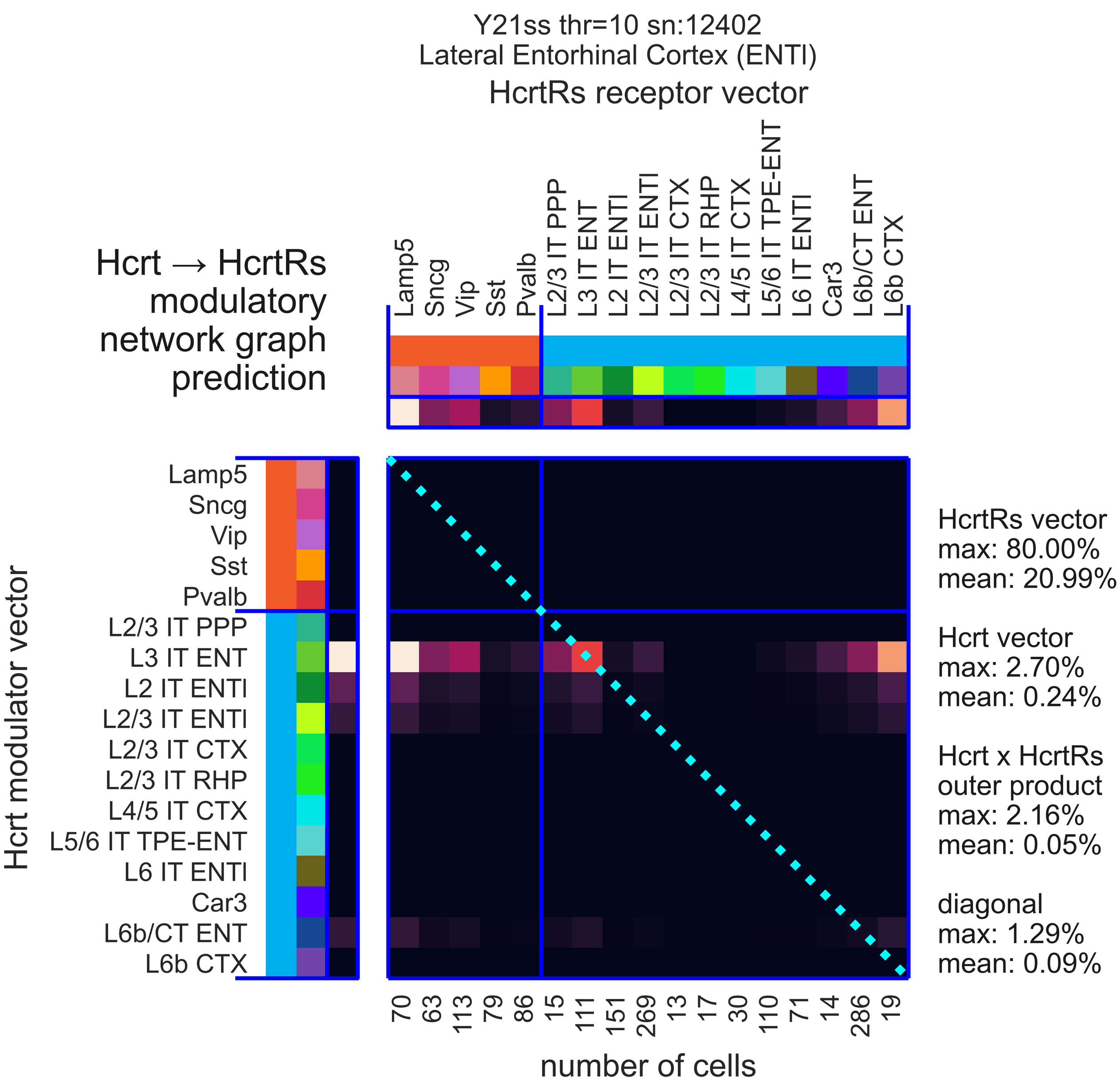



Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
HcrtRs receptor vector
Hcrt → HcrtRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Hcrt modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
HcrtRs vector
max: 68.24%
mean: 22.89%
Hcrt vector
max: 3.59%
mean: 1.02%
Hcrt x HcrtRs
outer product
max: 2.45%
mean: 0.23%
diagonal
max: 0.80%
mean: 0.14%

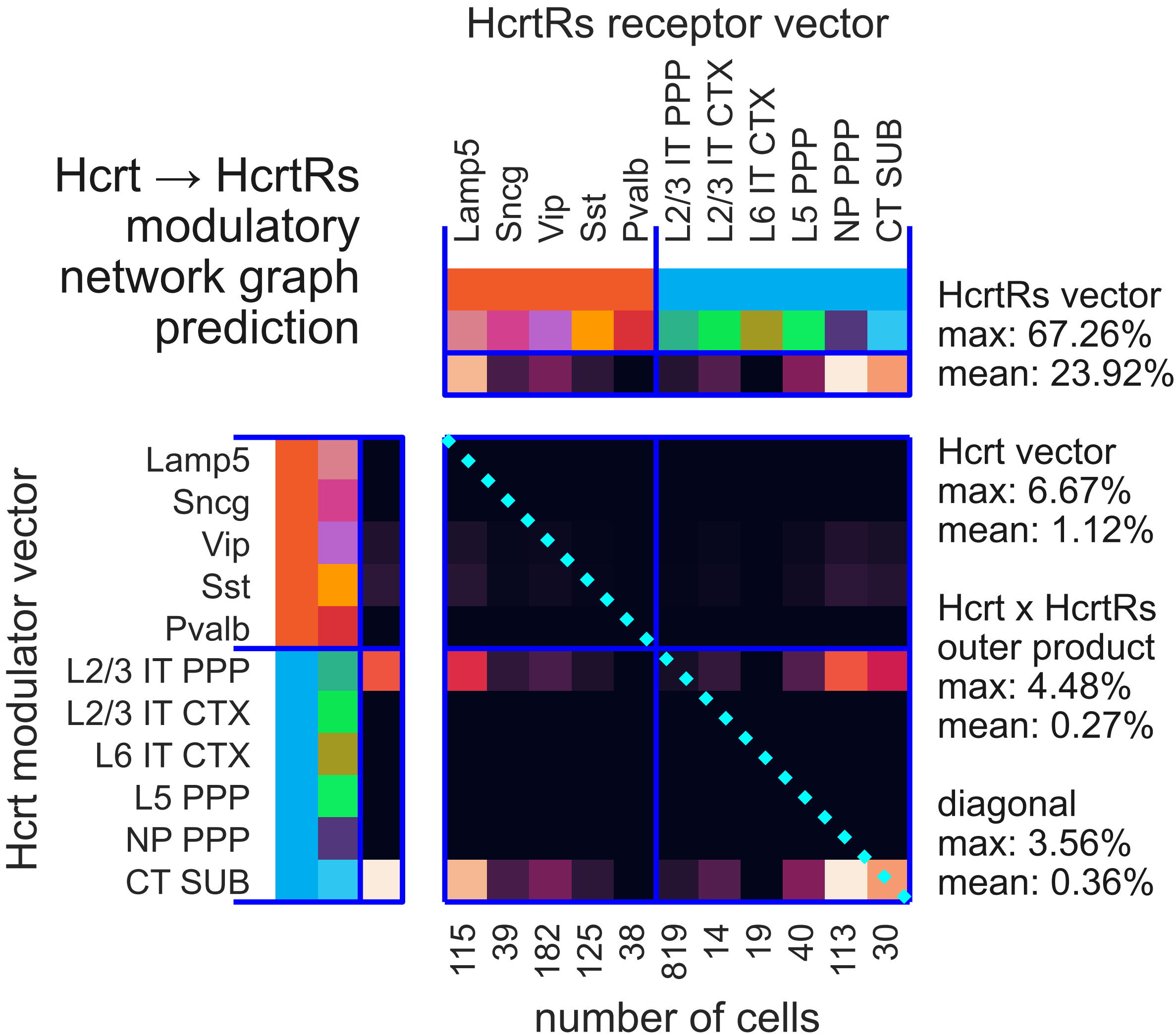
Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)



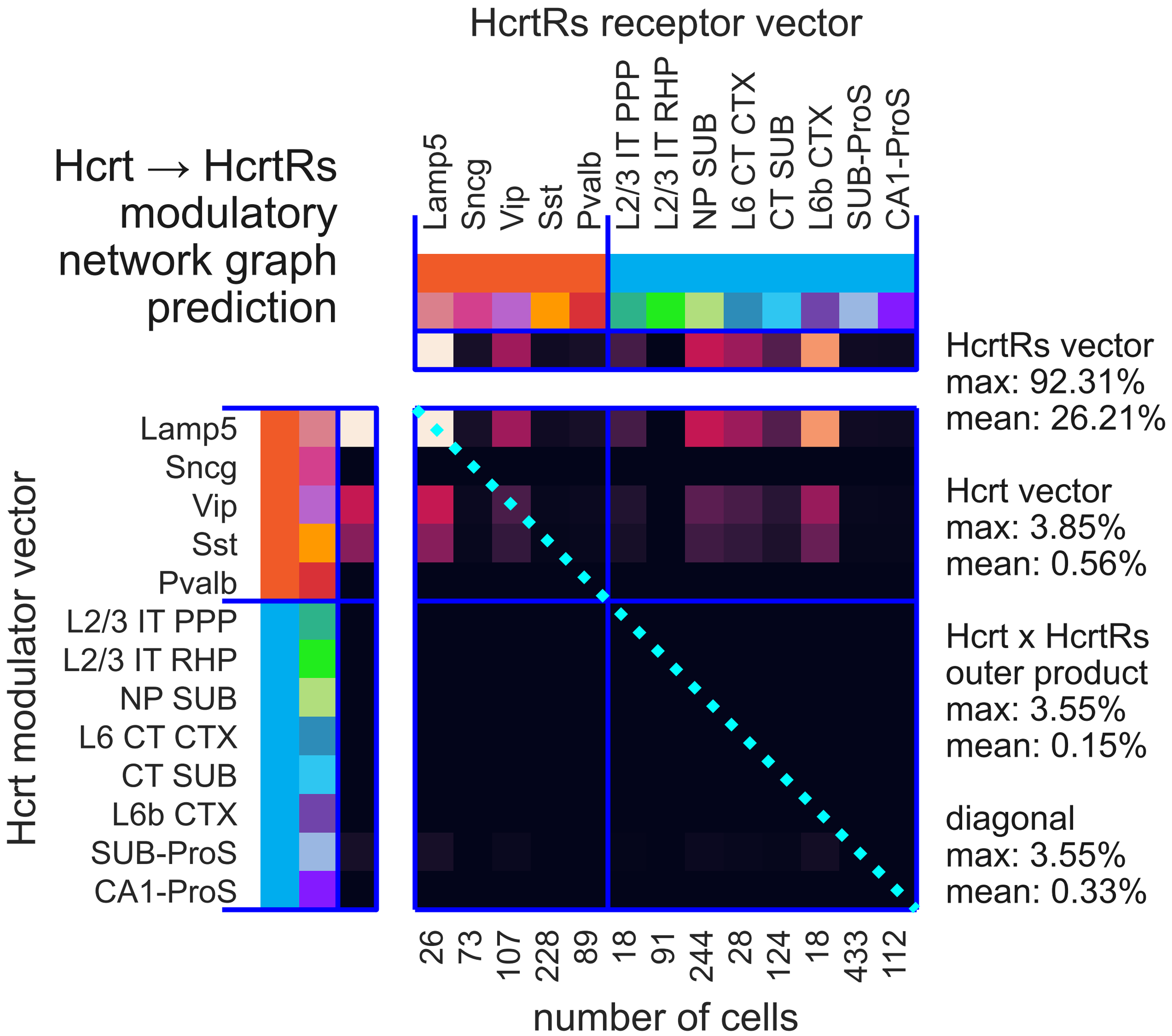

Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
HcrtRs receptor vector
Hcrt → HcrtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Hcrt modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
HcrtRs vector
max: 91.67%
mean: 27.83%
Hcrt vector
max: 5.56%
mean: 1.06%
Hcrt x HcrtRs
outer product
max: 5.09%
mean: 0.30%
diagonal
max: 0.89%
mean: 0.11%


Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
HcrtRs receptor vector
Hcrt → HcrtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Hcrt modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
HcrtRs vector
max: 80.00%
mean: 20.99%
Hcrt vector
max: 2.70%
mean: 0.24%
Hcrt x HcrtRs
outer product
max: 2.16%
mean: 0.05%
diagonal
max: 1.29%
mean: 0.09%

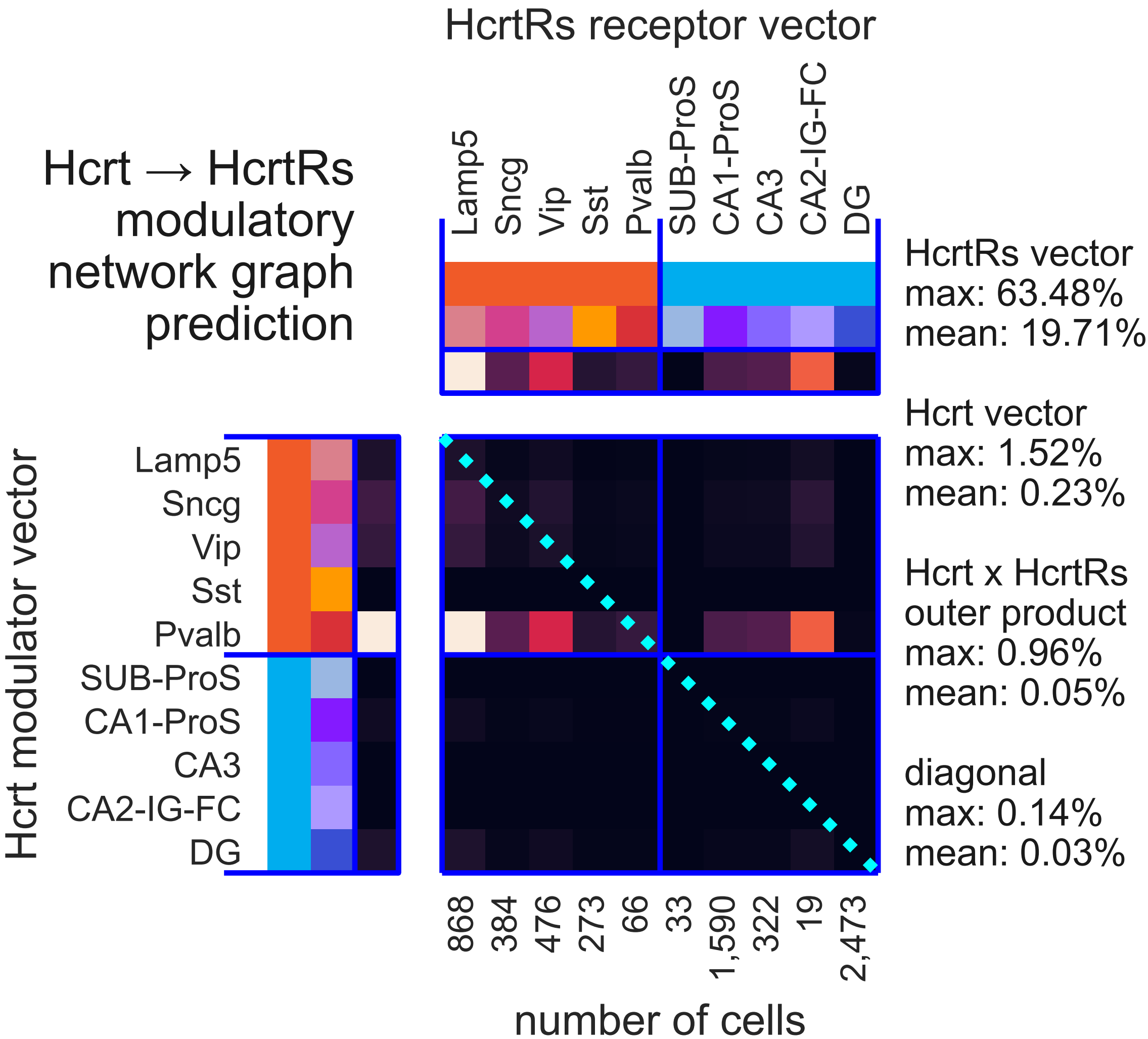
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



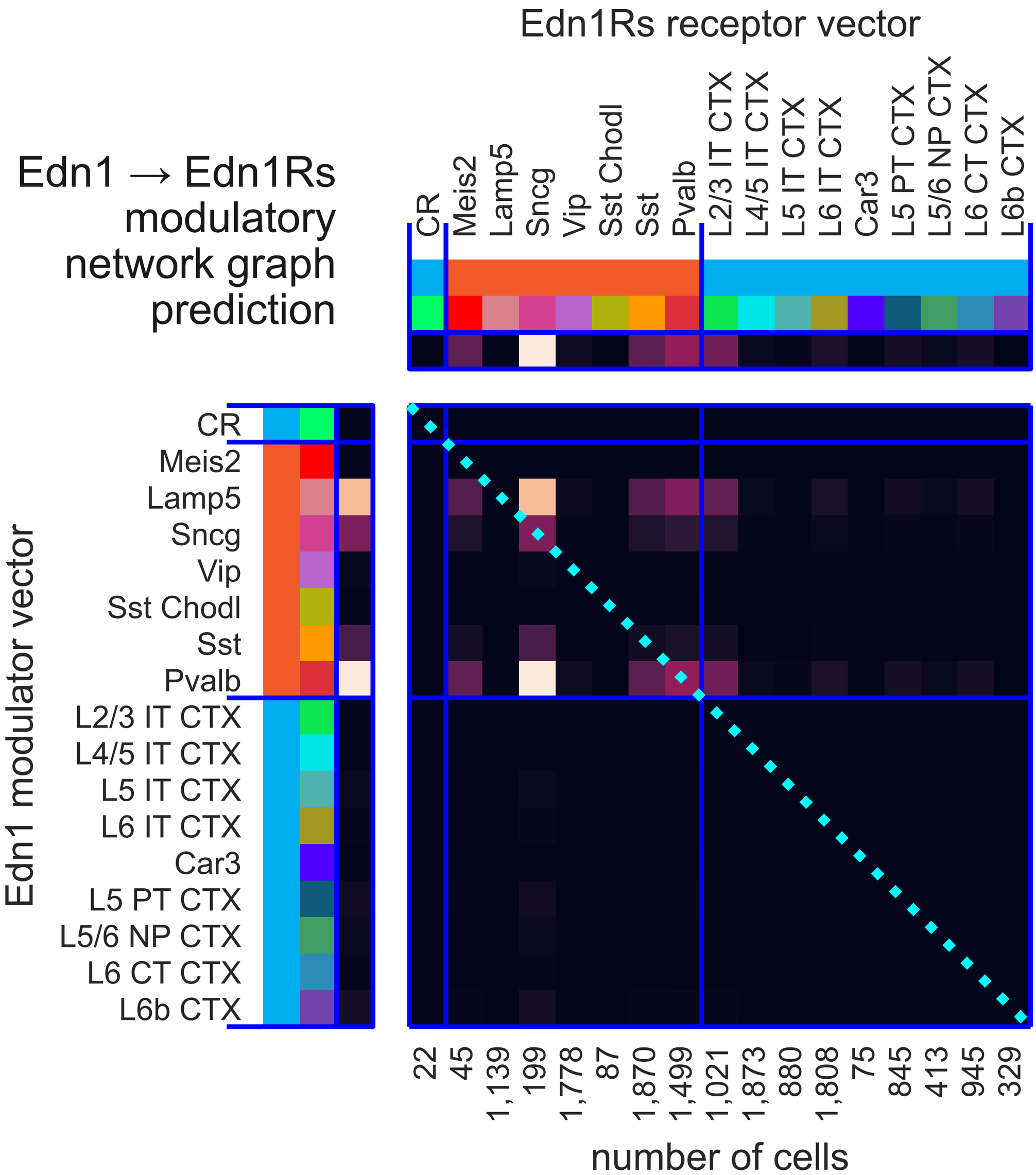
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



Y21ss thr=10 sn:12402
Hippocampus (HIP)



Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



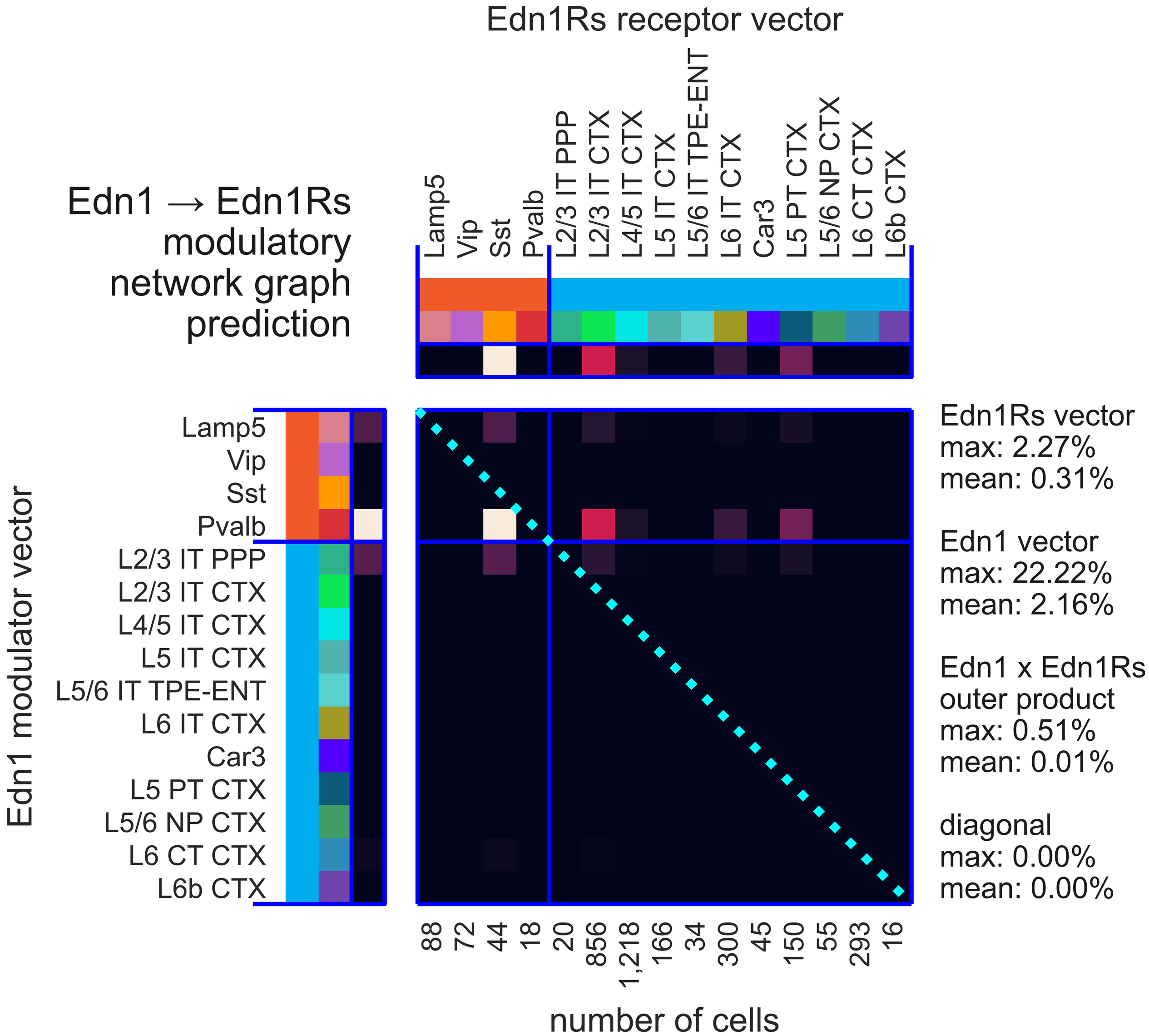
Edn1Rs vector
max: 9.05%
mean: 1.29%

Edn1 vector
max: 17.28%
mean: 2.64%

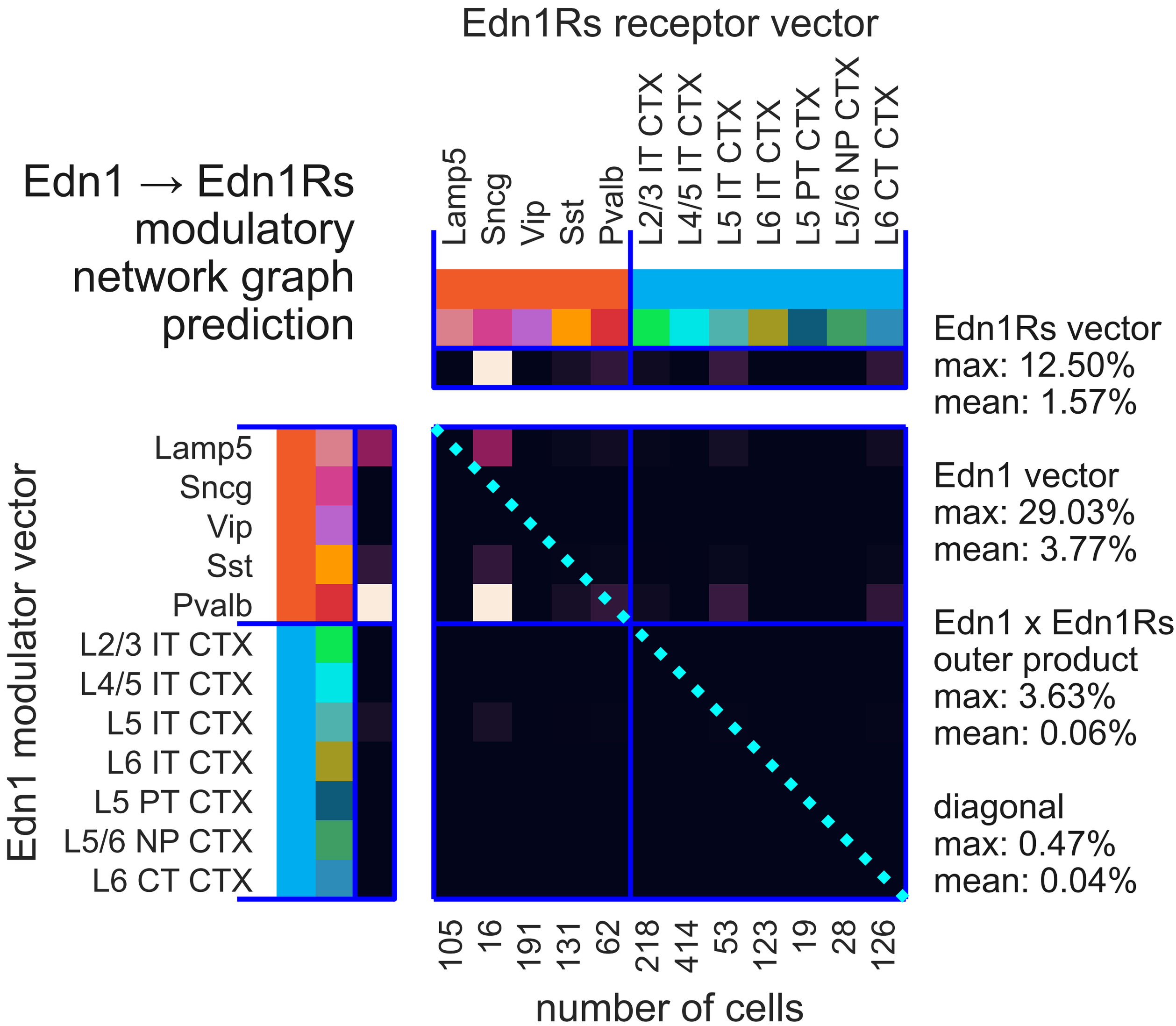
Edn1 x Edn1Rs
outer product
max: 1.56%
mean: 0.03%

diagonal
max: 0.58%
mean: 0.07%

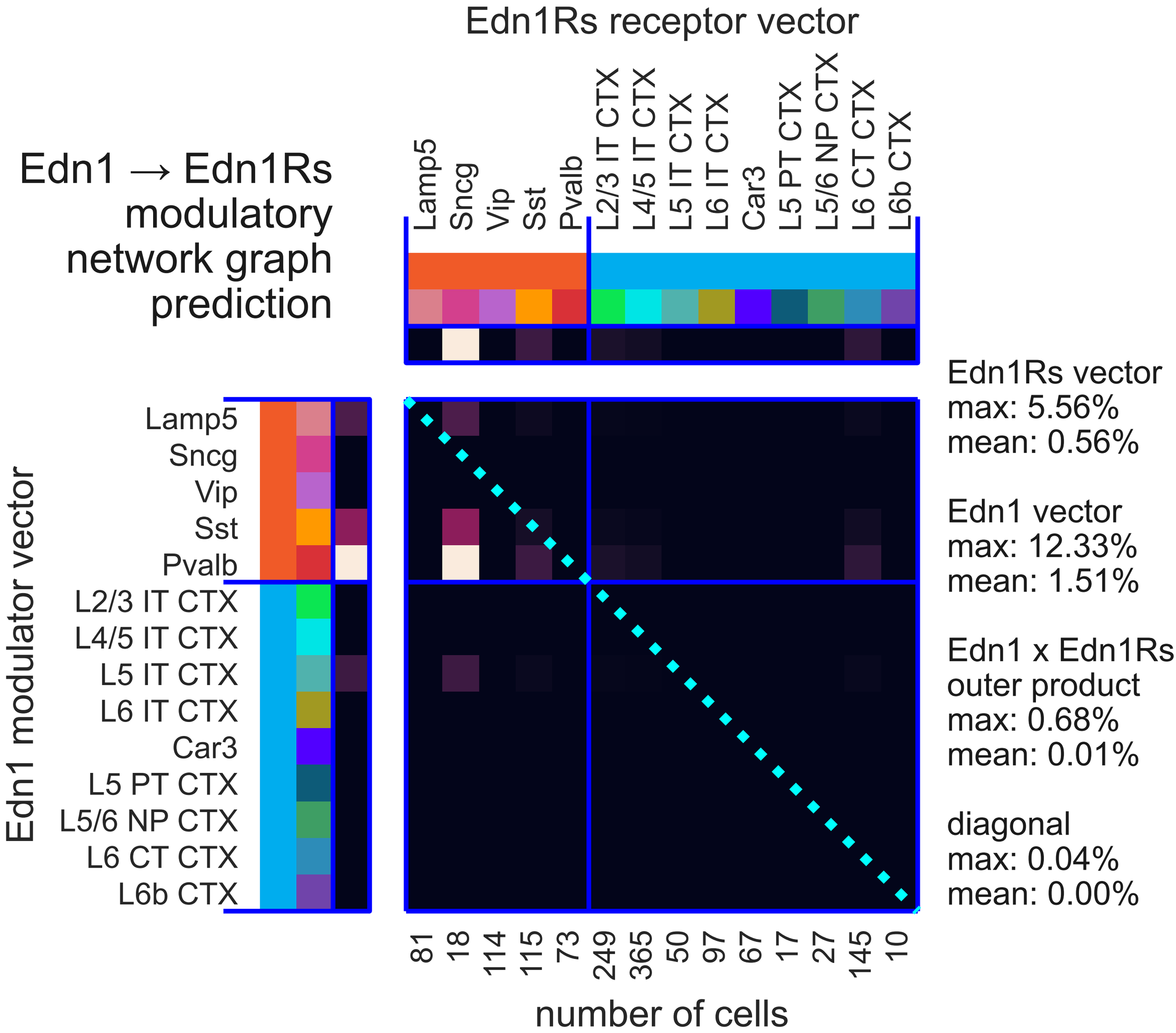
Y21ss thr=10 sn:12402
Visual Cortex (VIS)



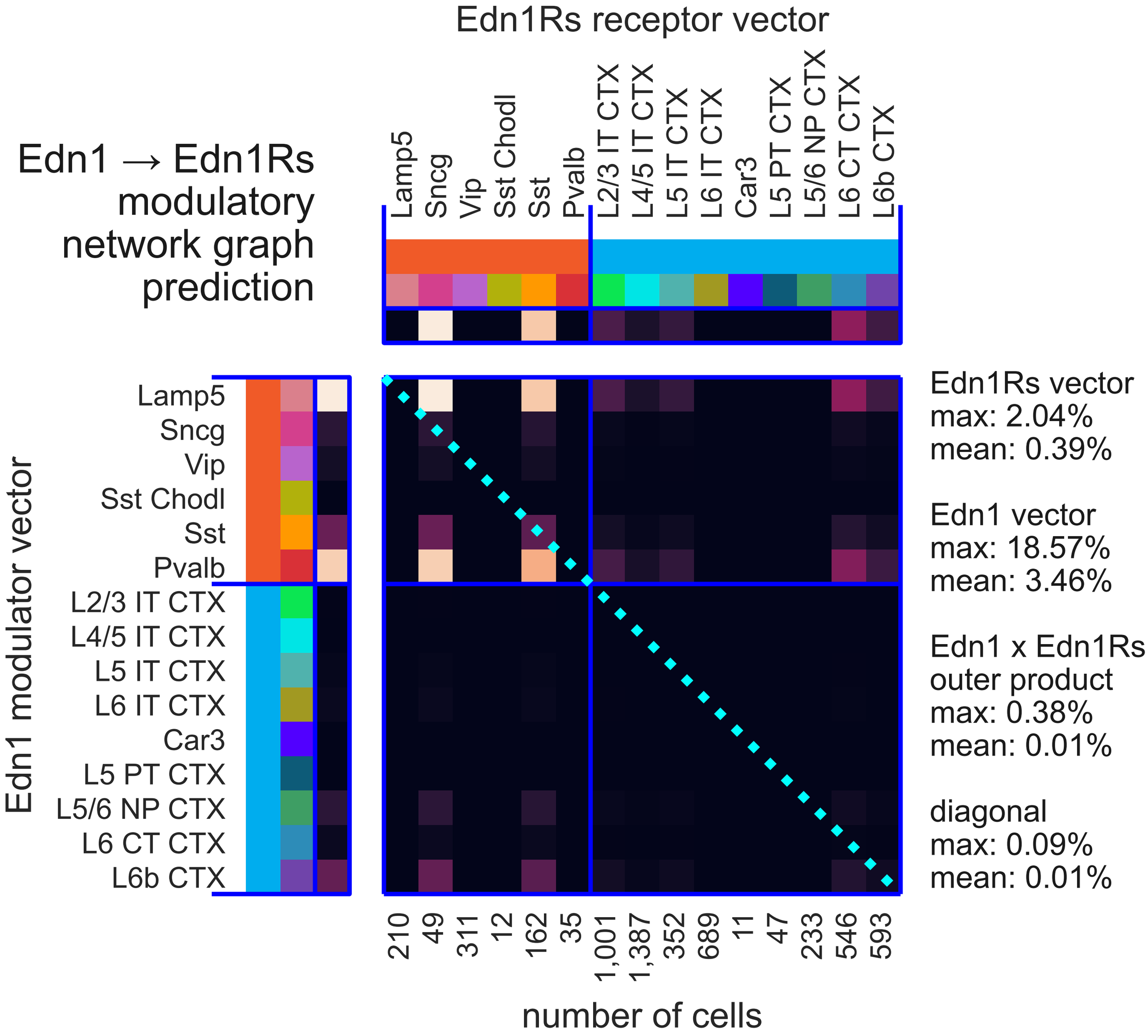
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



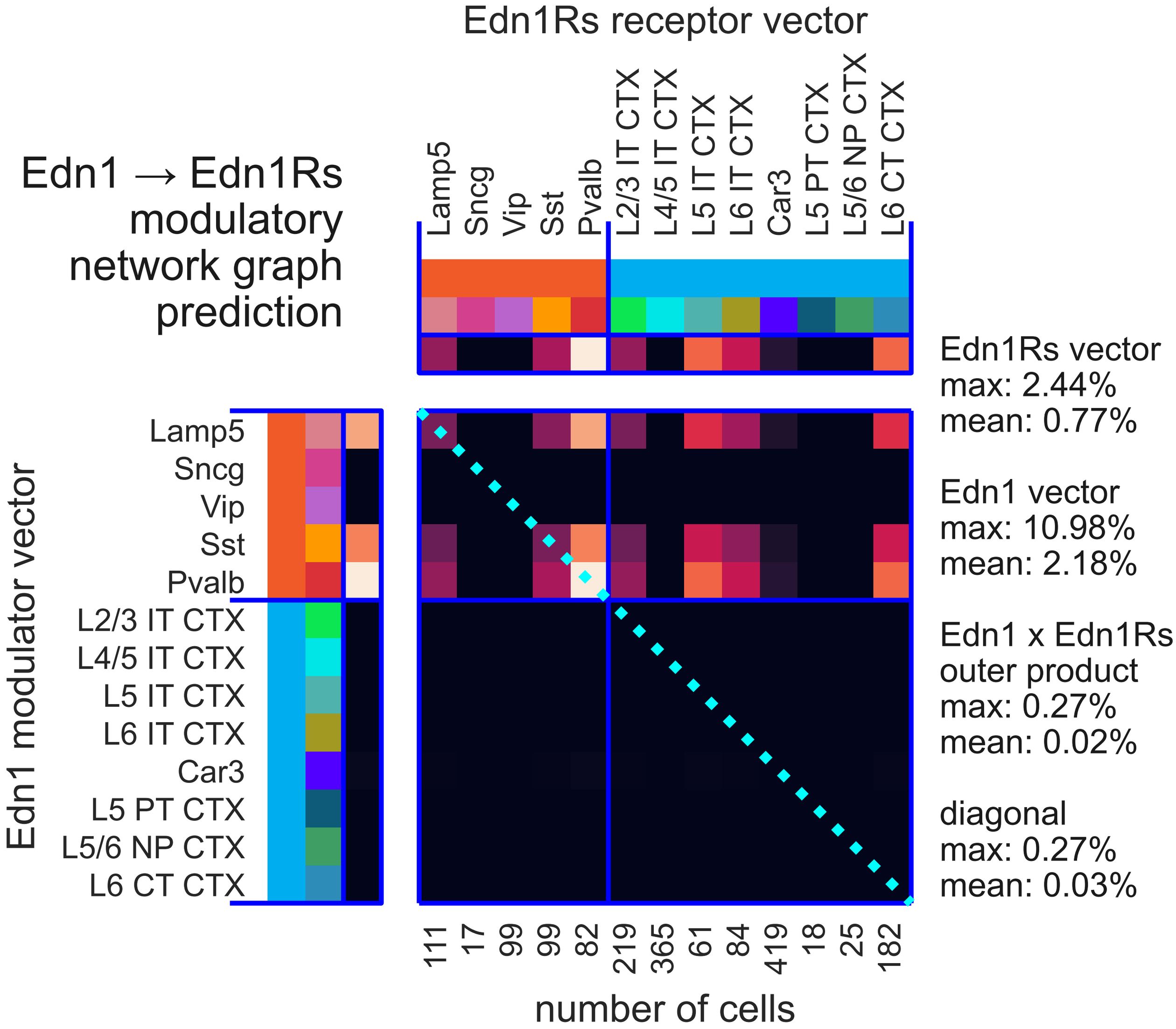
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

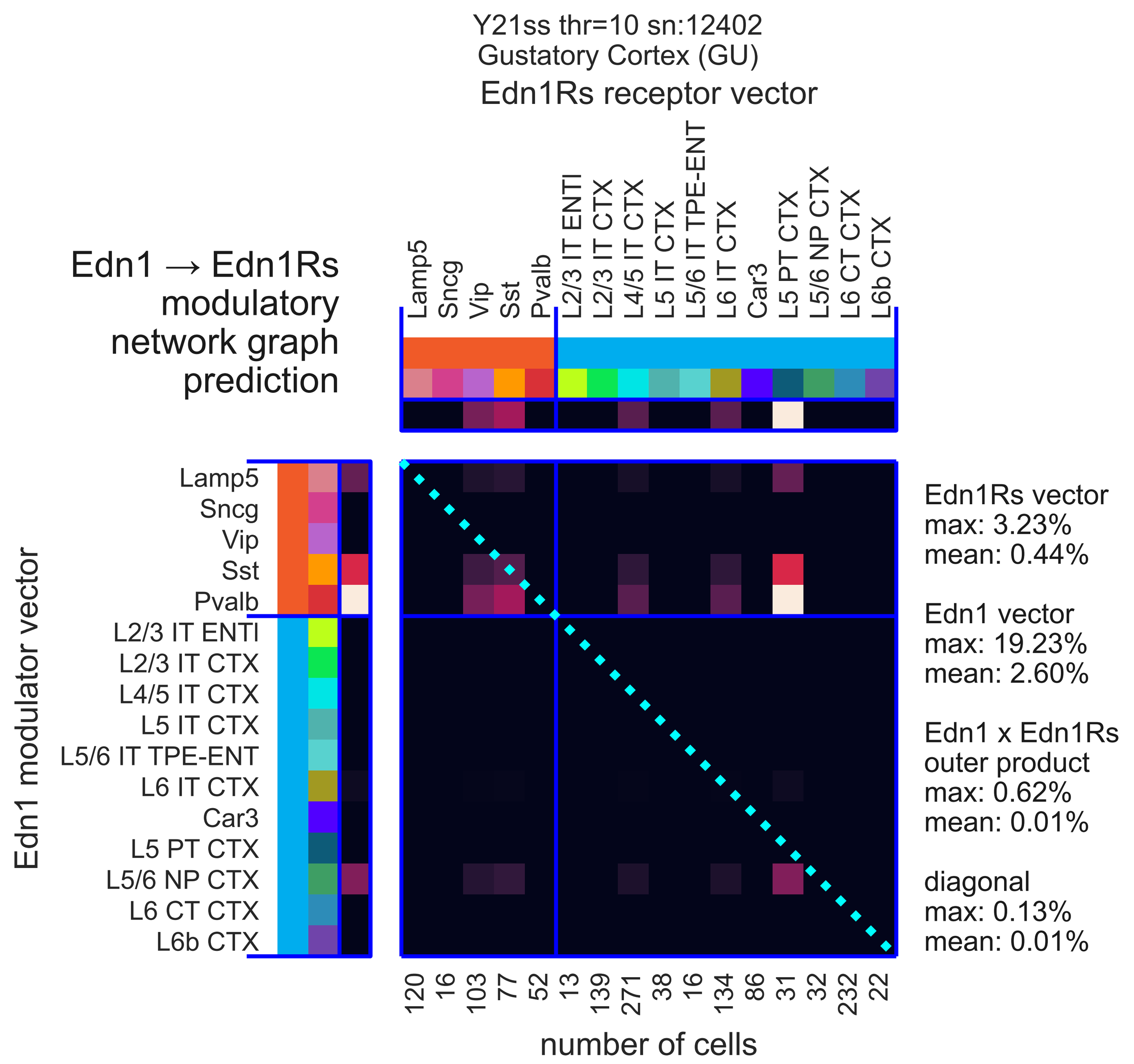


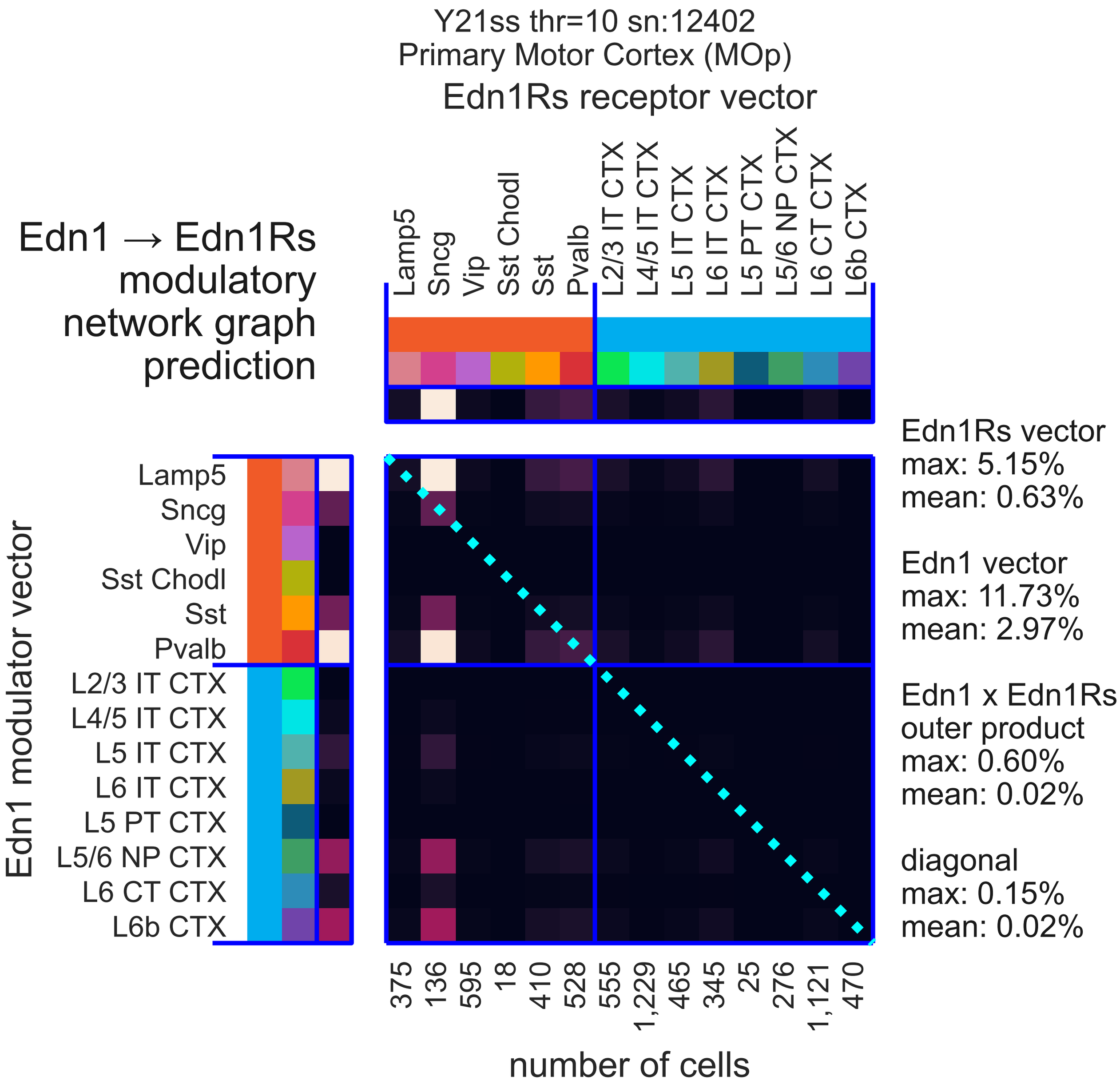
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



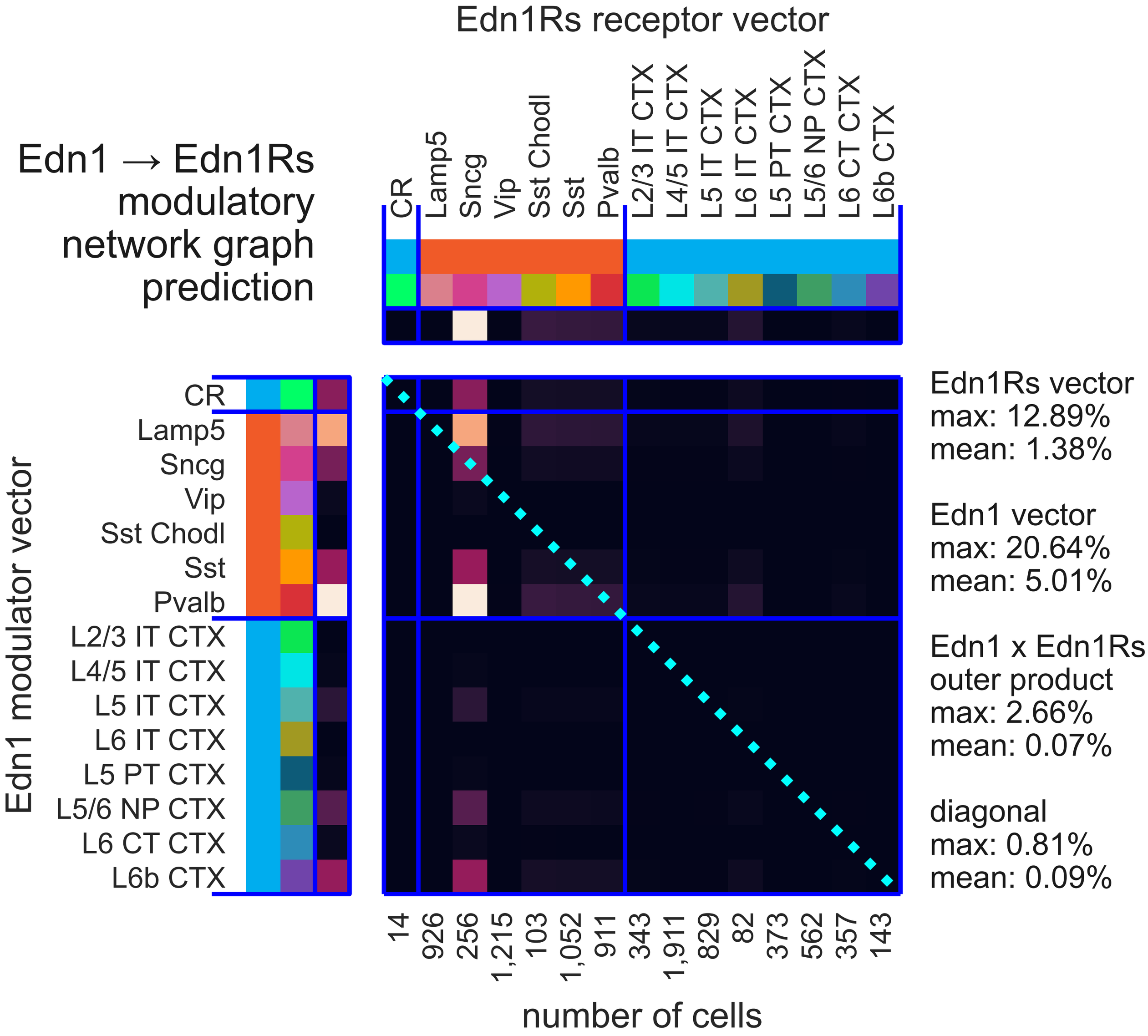
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



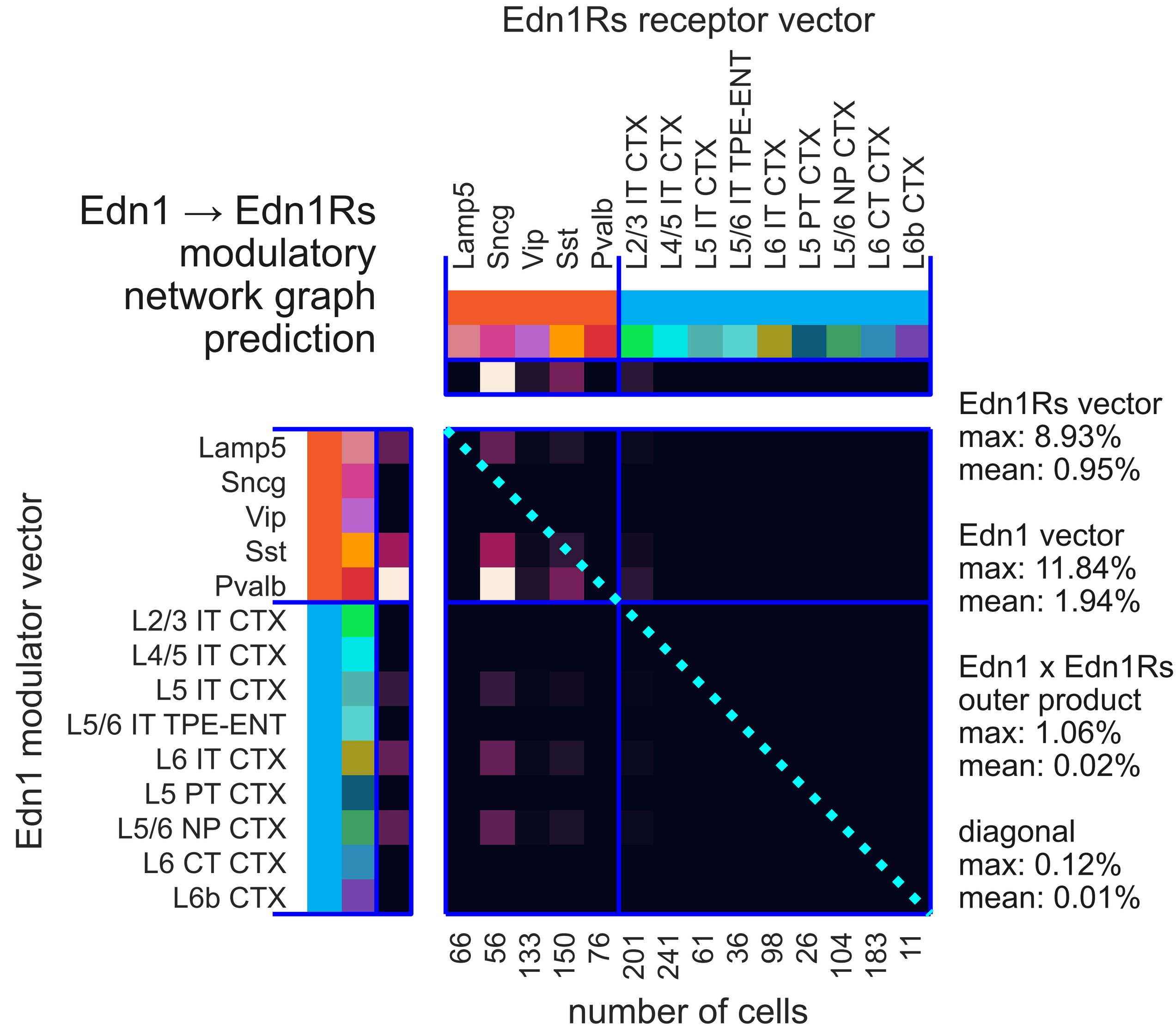

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
Edn1Rs receptor vector
Edn1 → Edn1Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTl
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Edn1 modulator vector
Edn1Rs vector
max: 3.23%
mean: 0.44%
Edn1 vector
max: 19.23%
mean: 2.60%
Edn1 x Edn1Rs
outer product
max: 0.62%
mean: 0.01%
diagonal
max: 0.13%
mean: 0.01%
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells

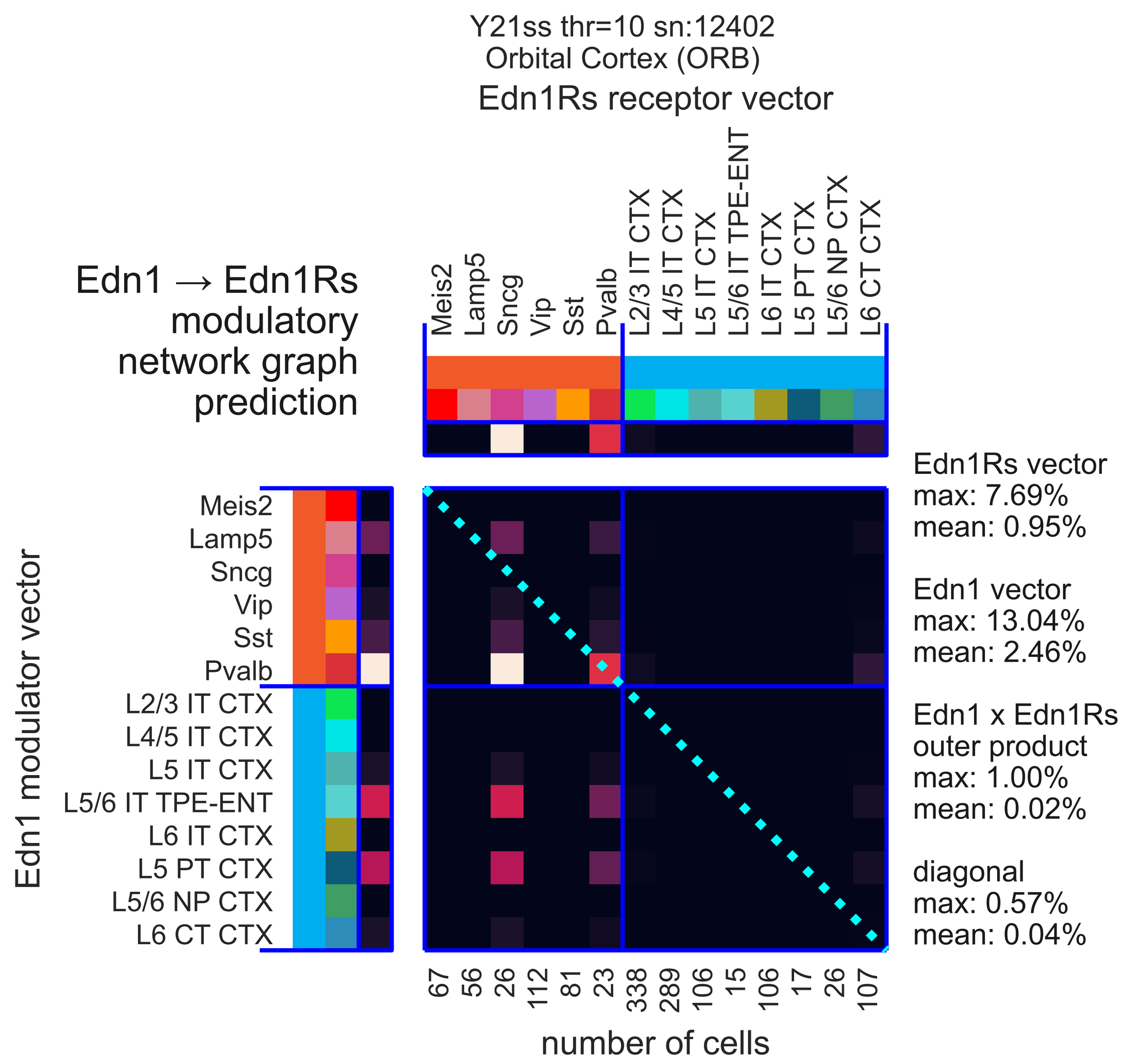

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
Edn1Rs receptor vector
Edn1 → Edn1Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Edn1 modulator vector
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells
Edn1Rs vector
max: 5.15%
mean: 0.63%
Edn1 vector
max: 11.73%
mean: 2.97%
Edn1 x Edn1Rs
outer product
max: 0.60%
mean: 0.02%
diagonal
max: 0.15%
mean: 0.02%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

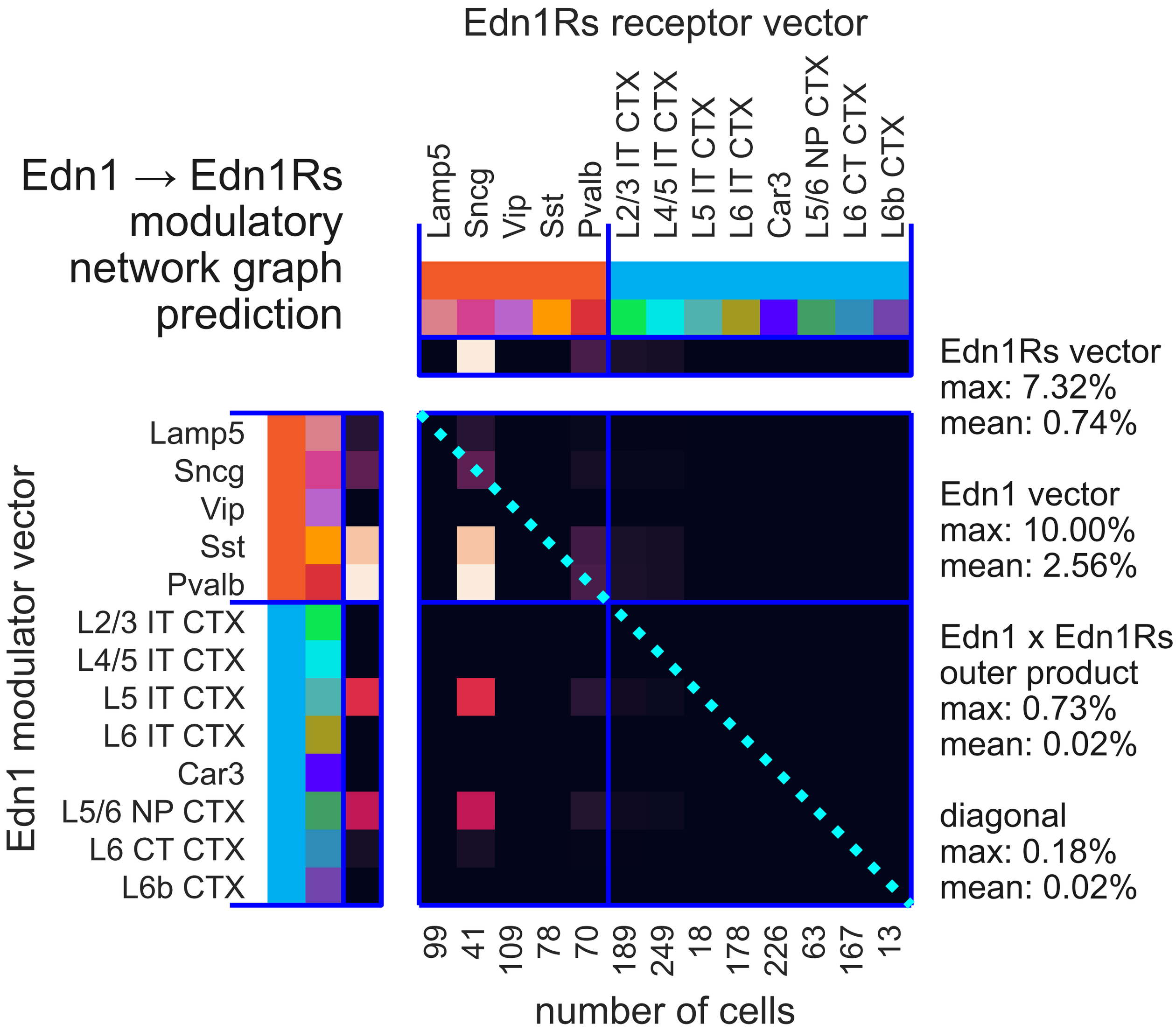


Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

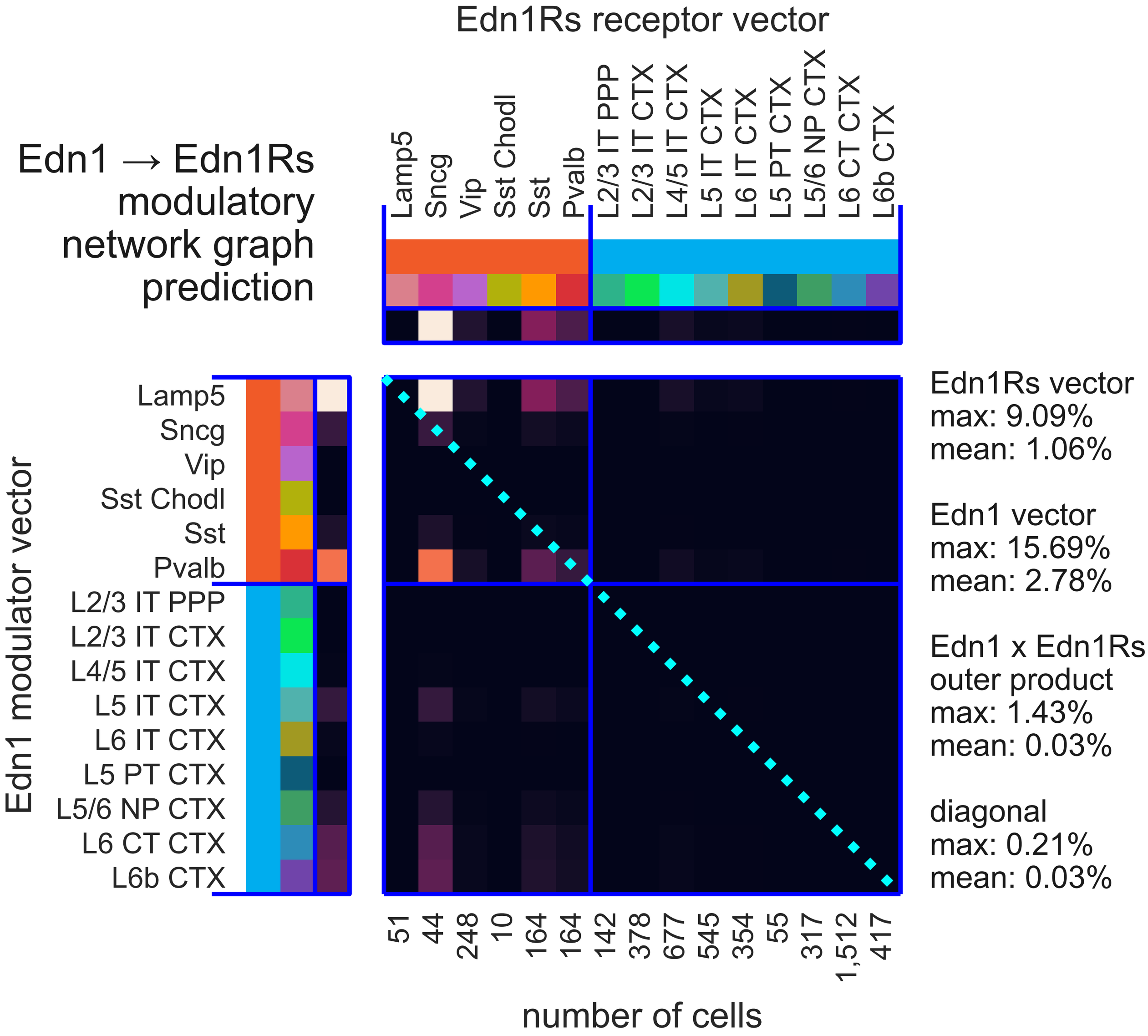


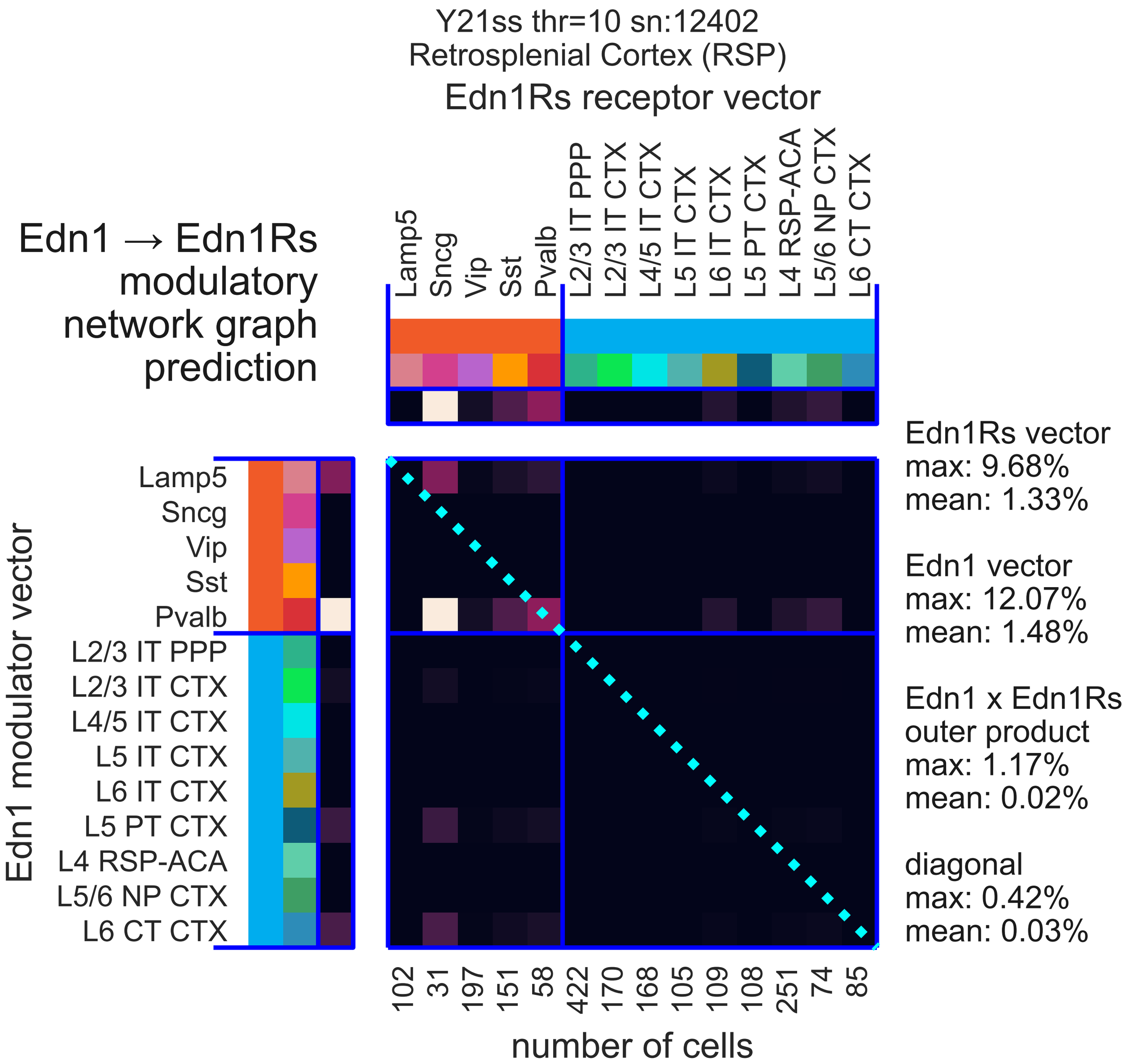

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
Edn1Rs receptor vector
Edn1 → Edn1Rs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Edn1 modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
Edn1Rs vector
max: 7.69%
mean: 0.95%
Edn1 vector
max: 13.04%
mean: 2.46%
Edn1 x Edn1Rs
outer product
max: 1.00%
mean: 0.02%
diagonal
max: 0.57%
mean: 0.04%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

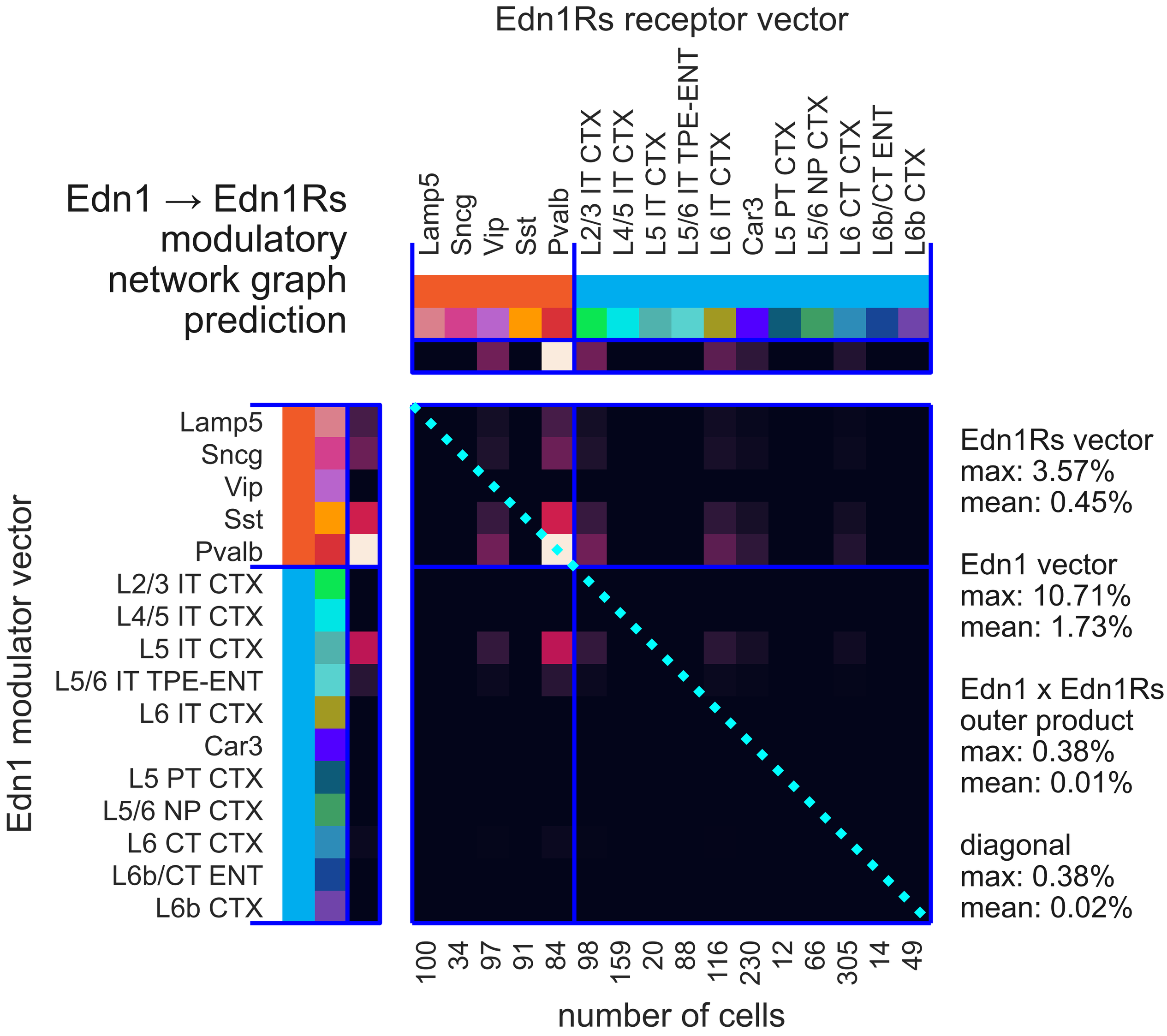


Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

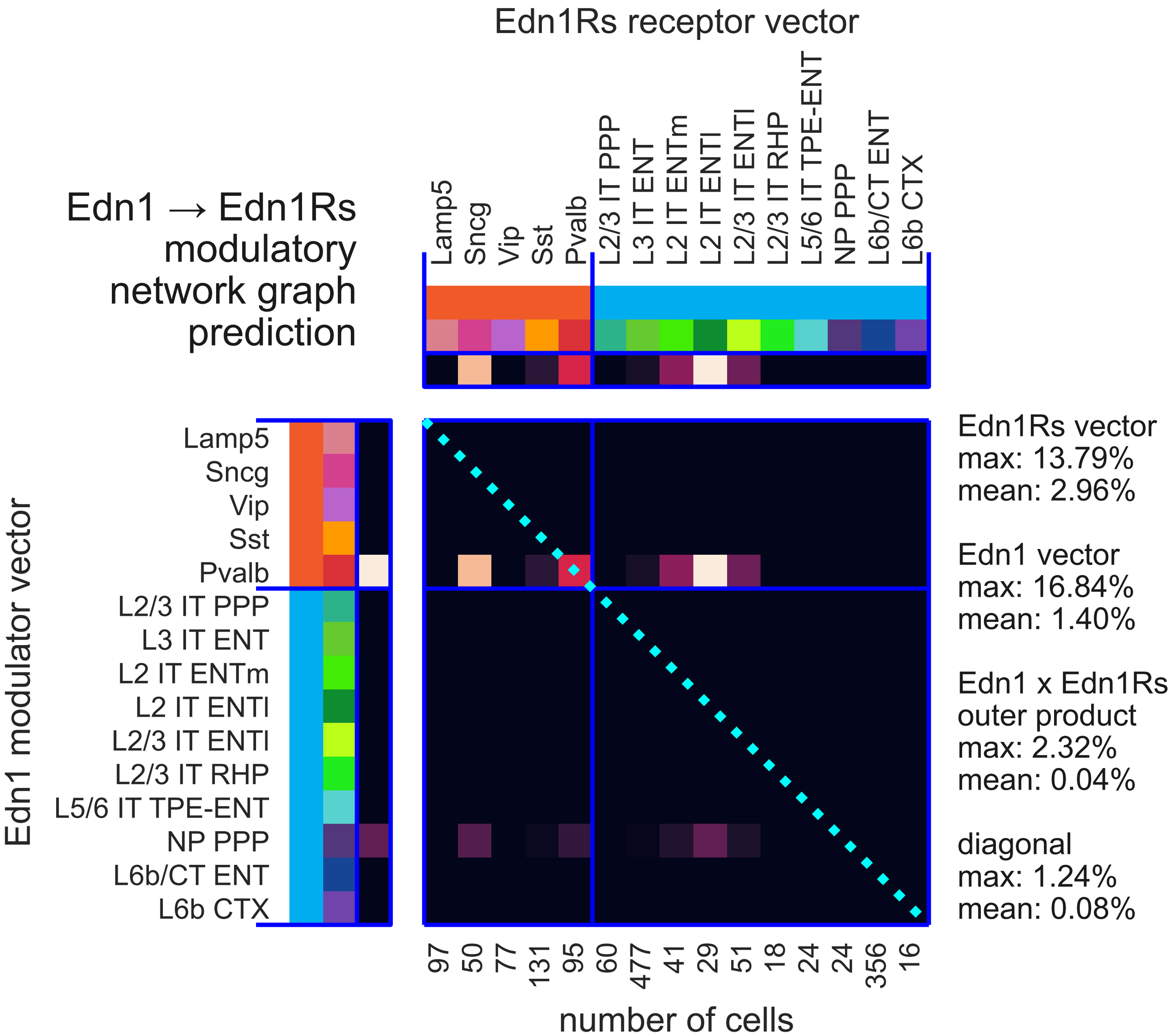


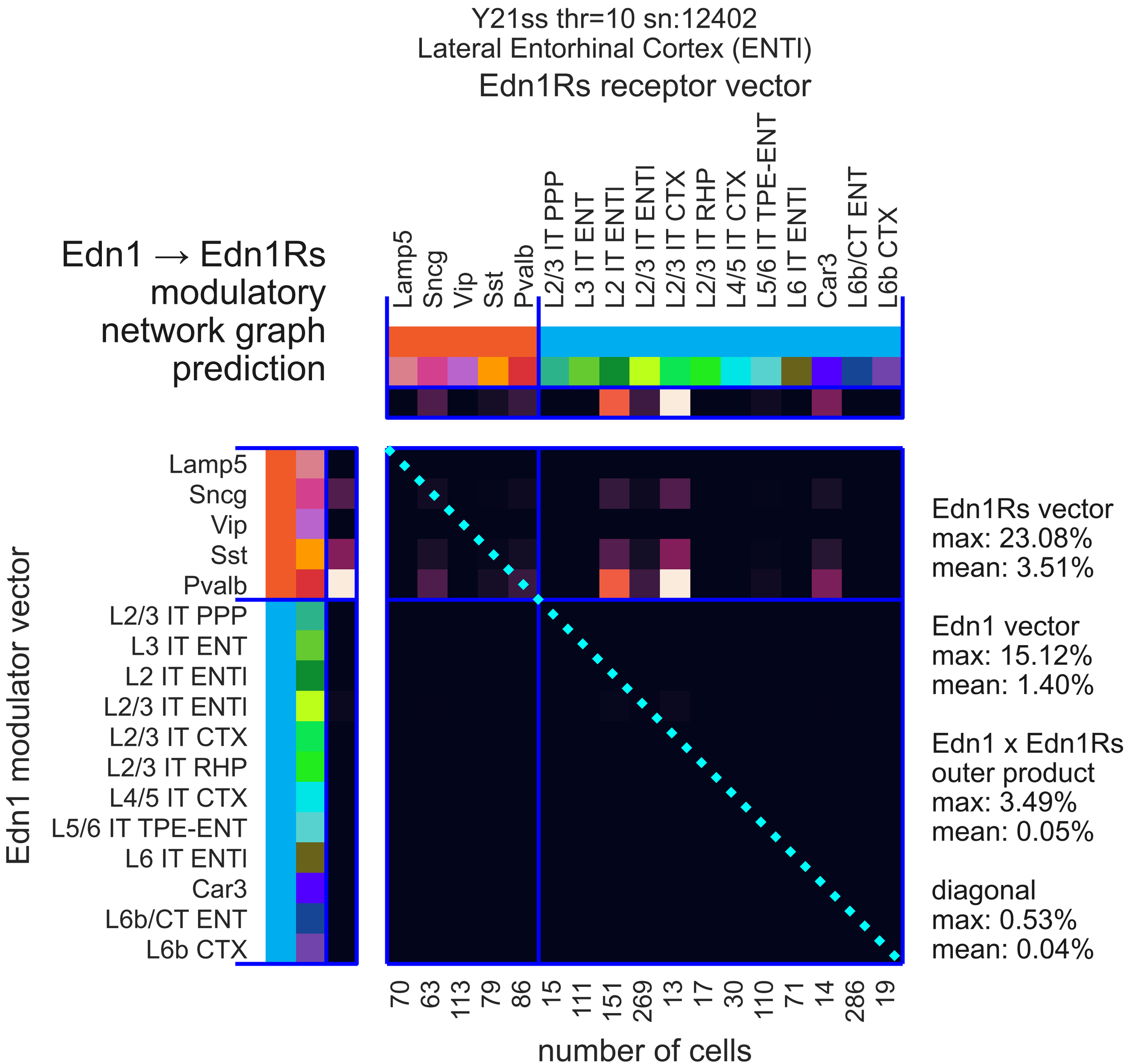

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
Edn1Rs receptor vector
Edn1 → Edn1Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Edn1 modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
Edn1Rs vector
max: 9.68%
mean: 1.33%
Edn1 vector
max: 12.07%
mean: 1.48%
Edn1 x Edn1Rs
outer product
max: 1.17%
mean: 0.02%
diagonal
max: 0.42%
mean: 0.03%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

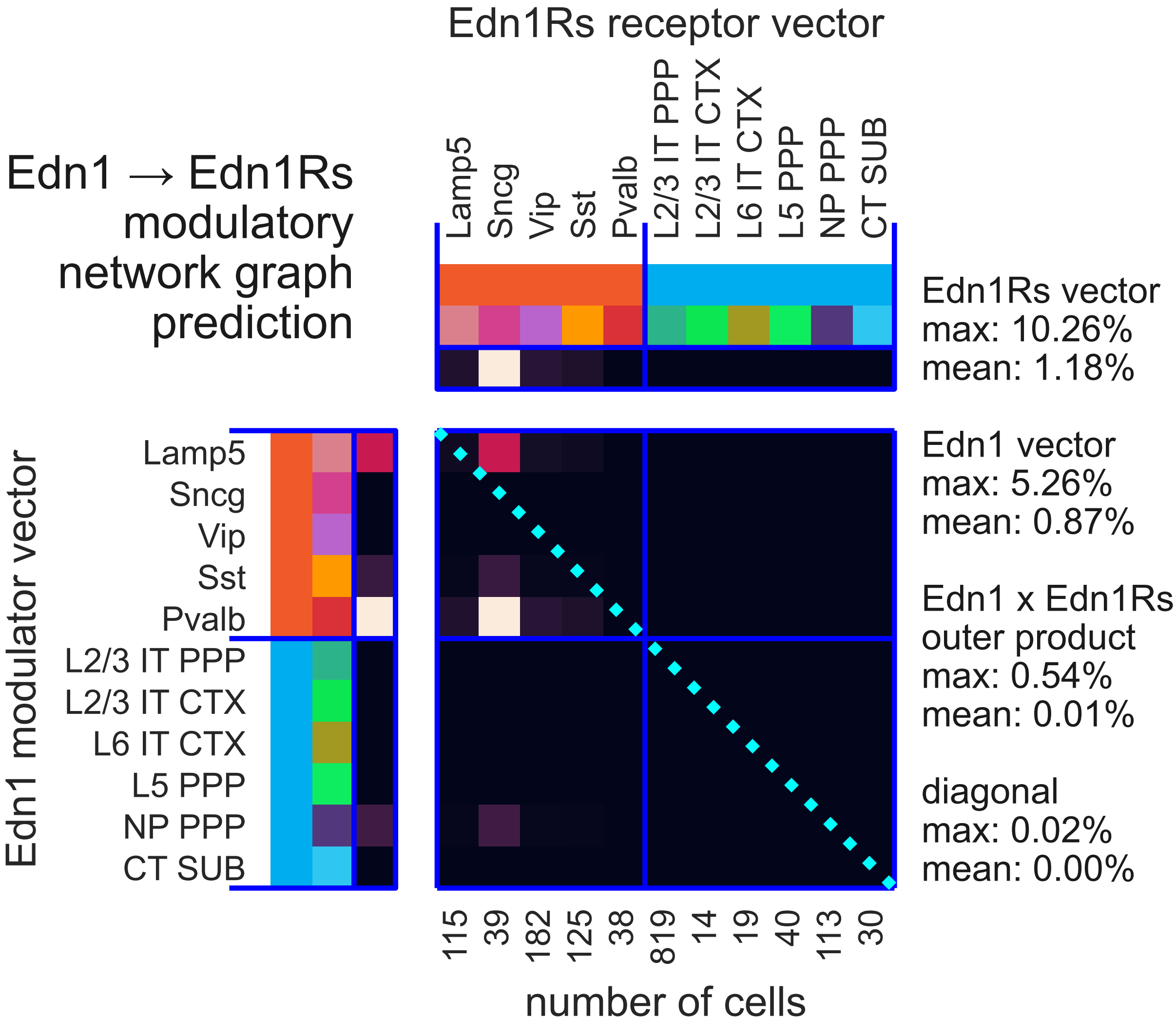


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

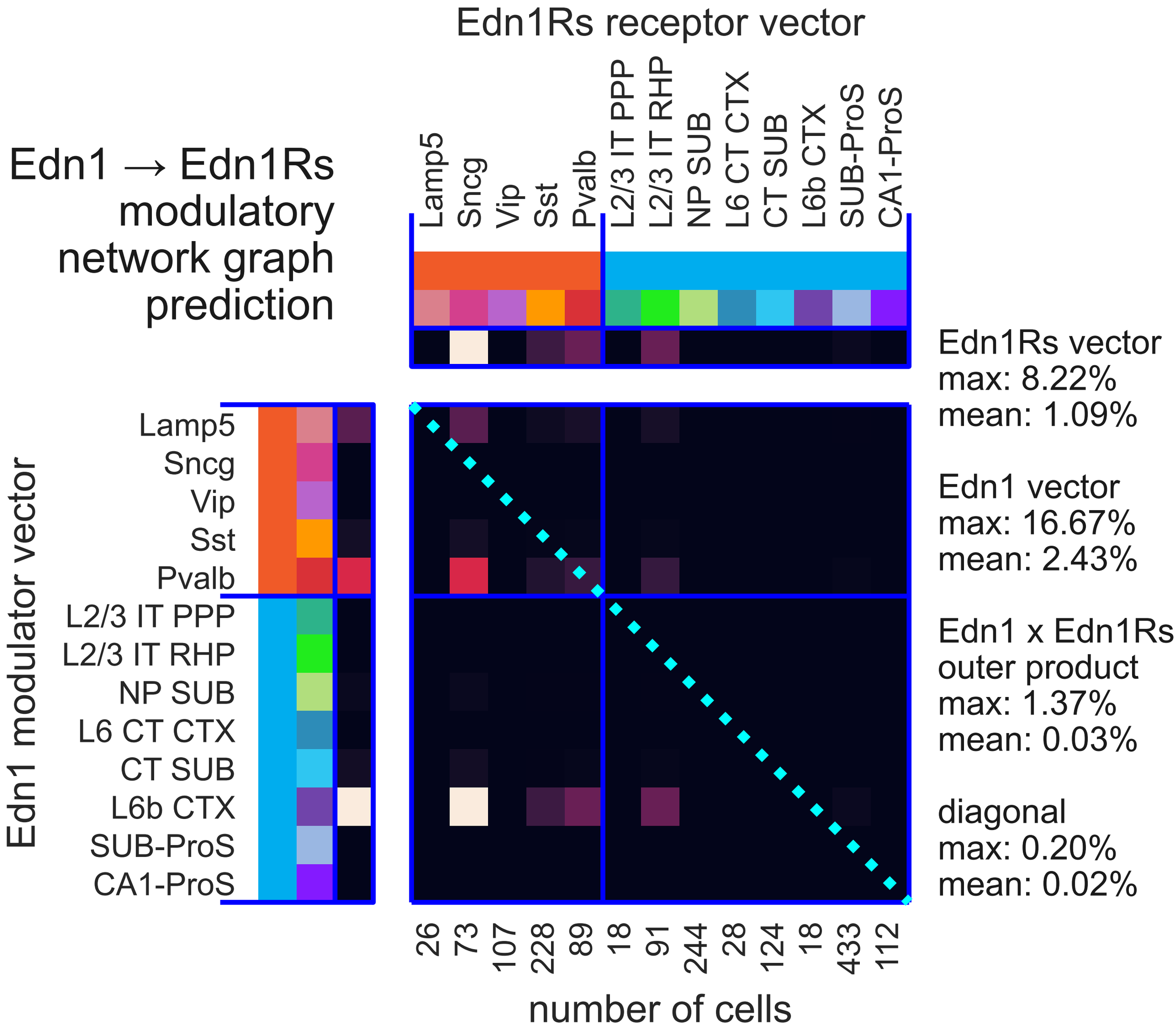



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTl)
Edn1Rs receptor vector
Edn1 → Edn1Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTl
Car3
L6b/CT ENT
L6b CTX
Edn1 modulator vector
Edn1Rs vector
max: 23.08%
mean: 3.51%
Edn1 vector
max: 15.12%
mean: 1.40%
Edn1 x Edn1Rs
outer product
max: 3.49%
mean: 0.05%
diagonal
max: 0.53%
mean: 0.04%
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells

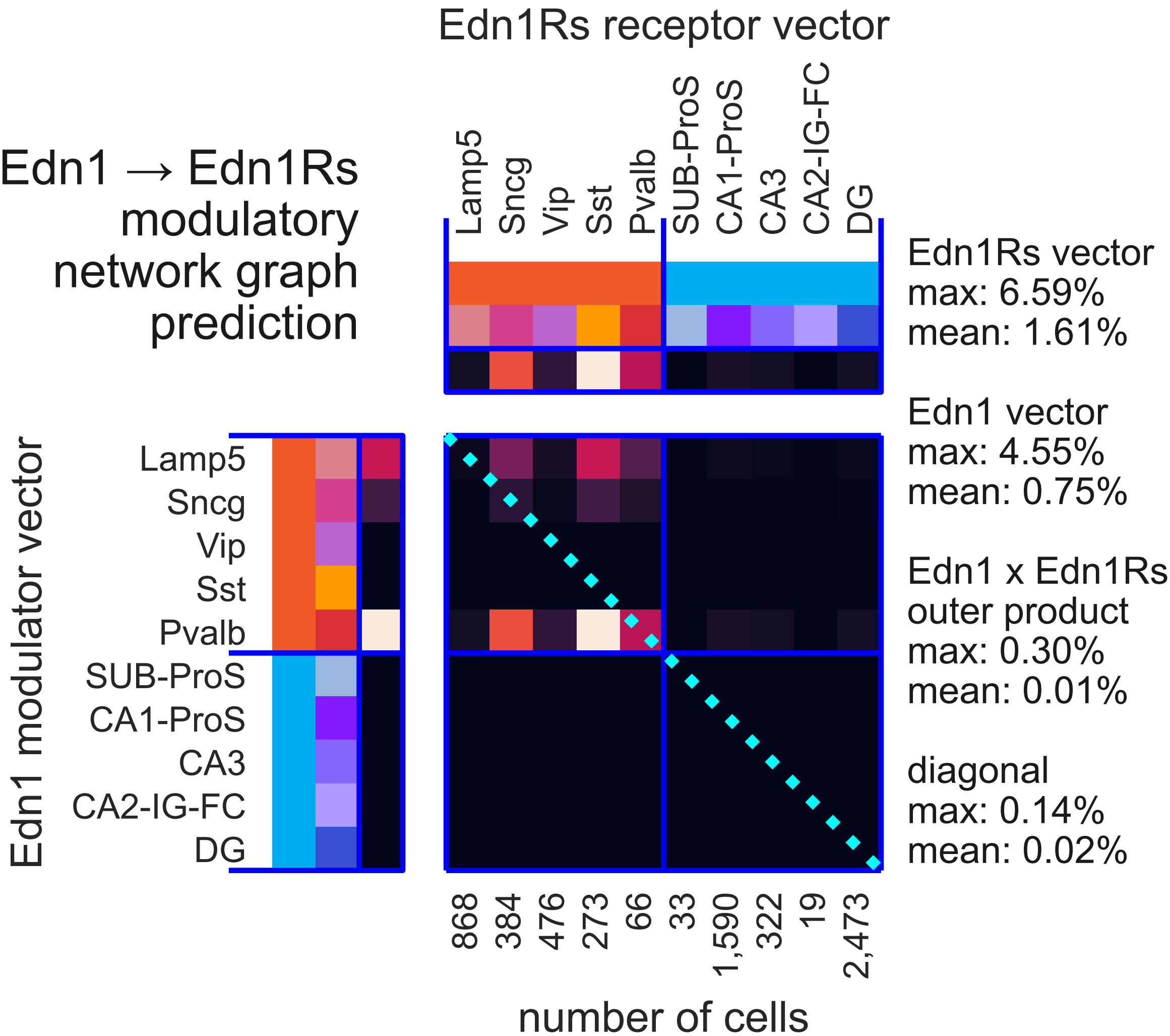
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



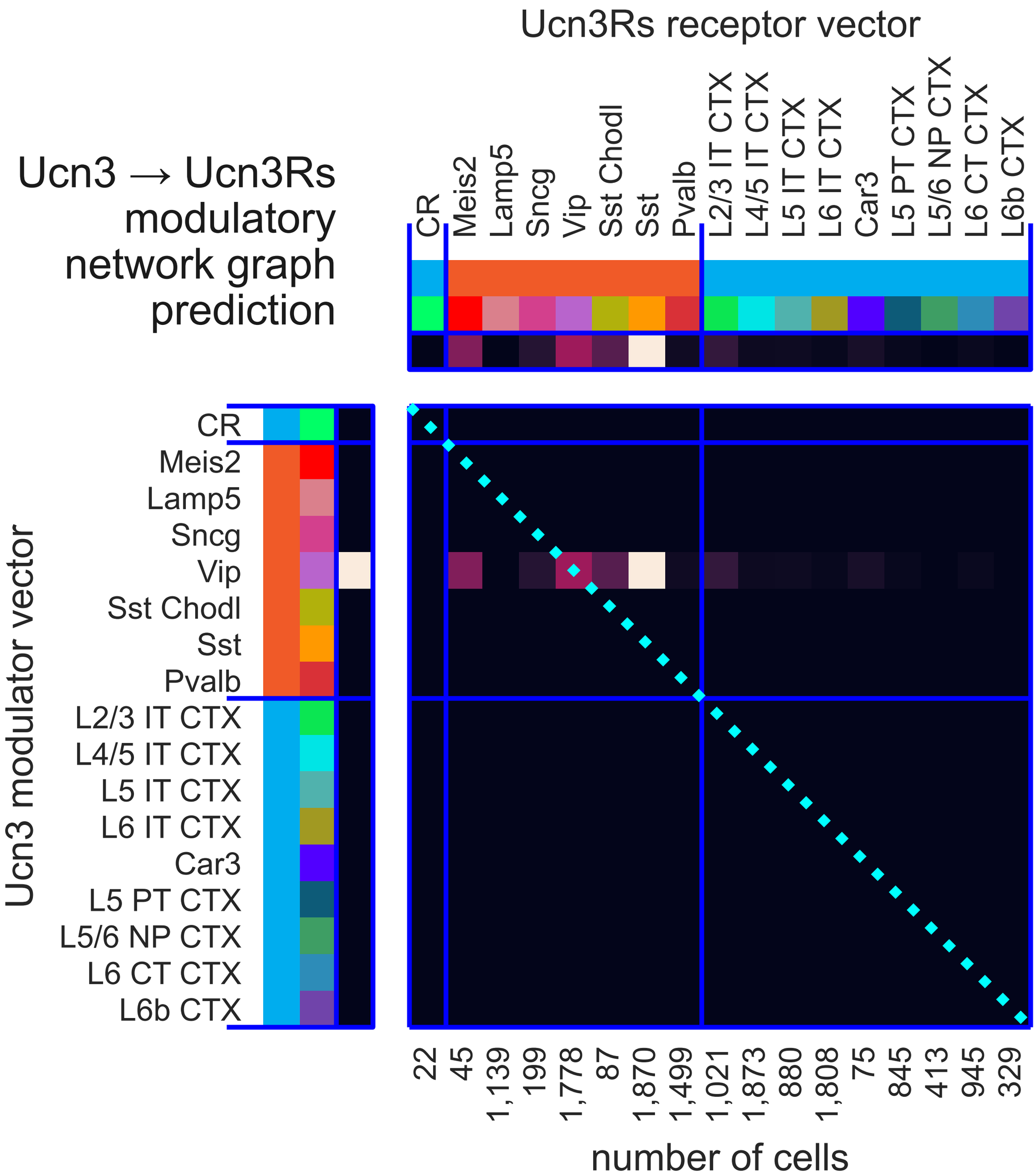
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



Y21ss thr=10 sn:12402
Hippocampus (HIP)



Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



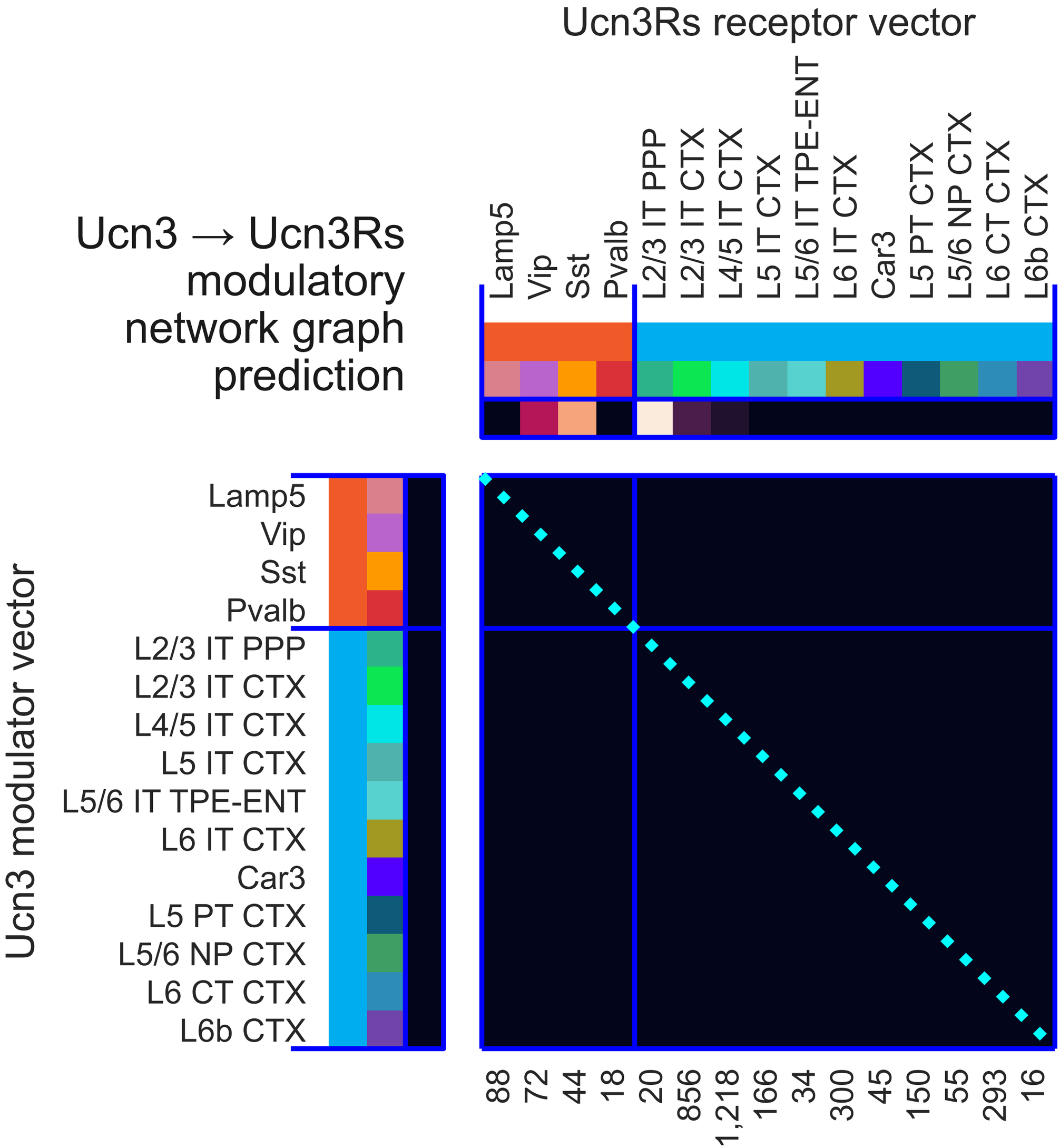
Ucn3Rs vector
max: 20.37%
mean: 2.91%

Ucn3 vector
max: 0.06%
mean: 0.00%

Ucn3 x Ucn3Rs
outer product
max: 0.01%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Visual Cortex (VIS)



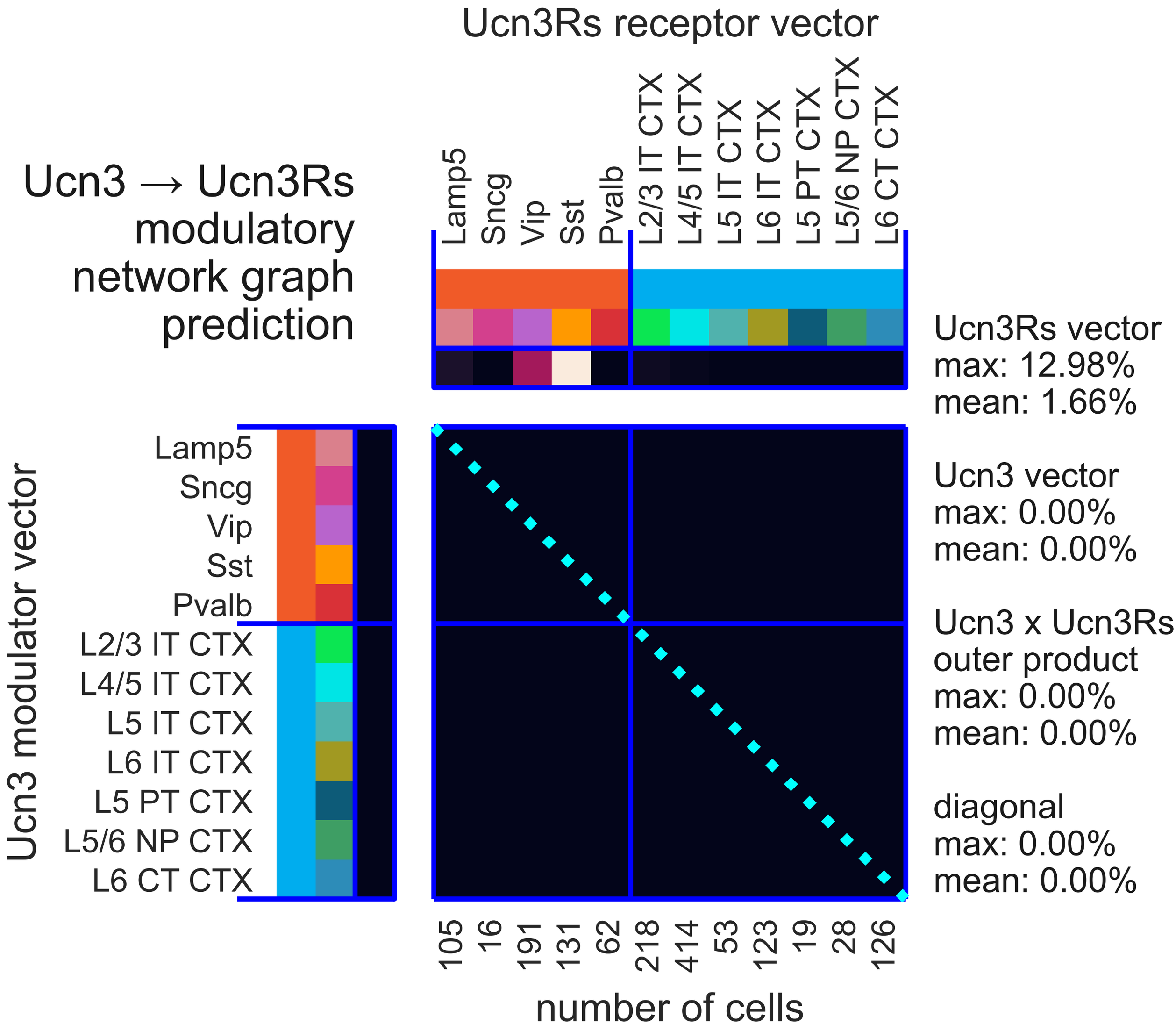
Ucn3Rs vector
max: 25.00%
mean: 4.23%

Ucn3 vector
max: 0.00%
mean: 0.00%

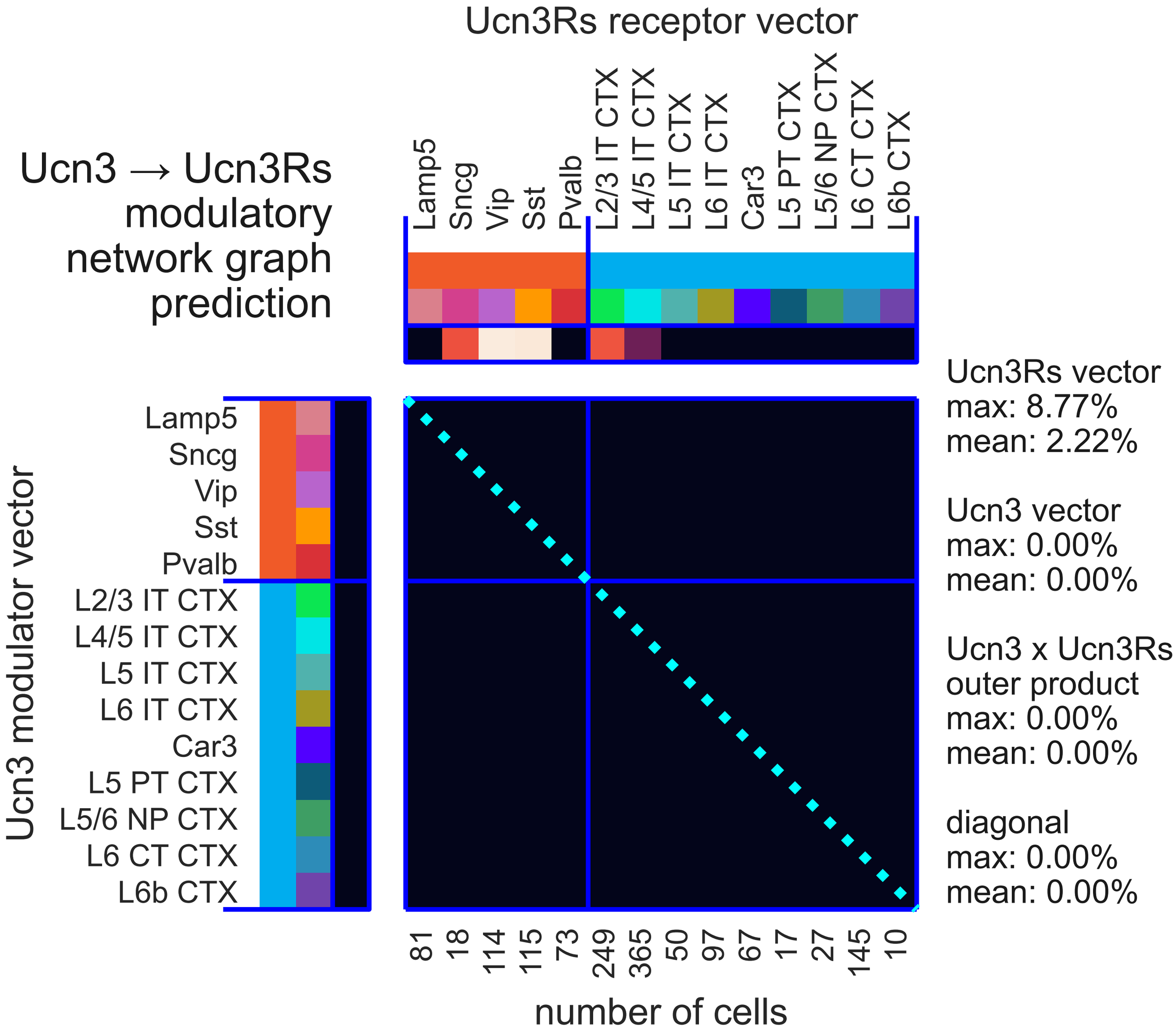
Ucn3 x Ucn3Rs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

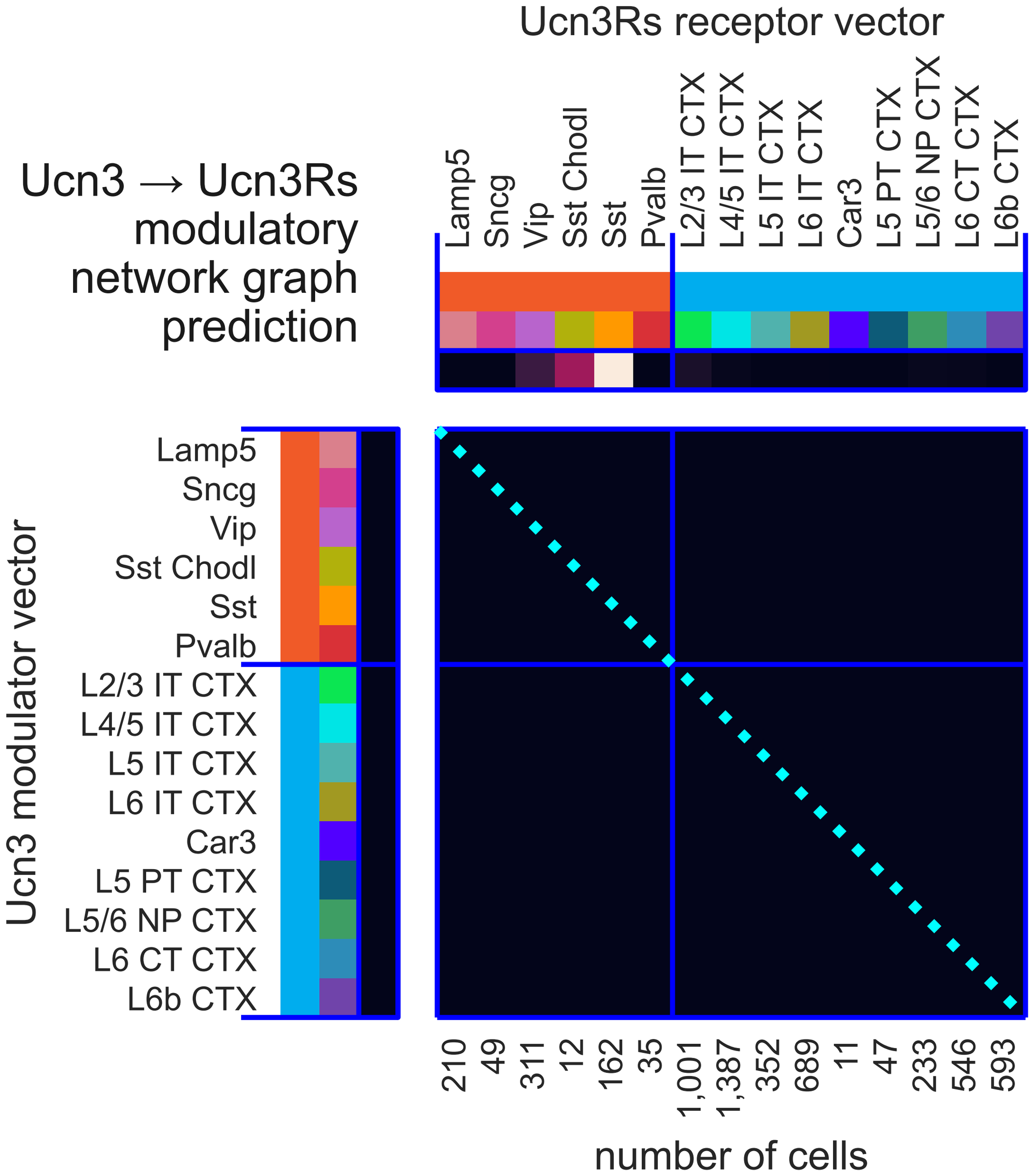
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)



Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



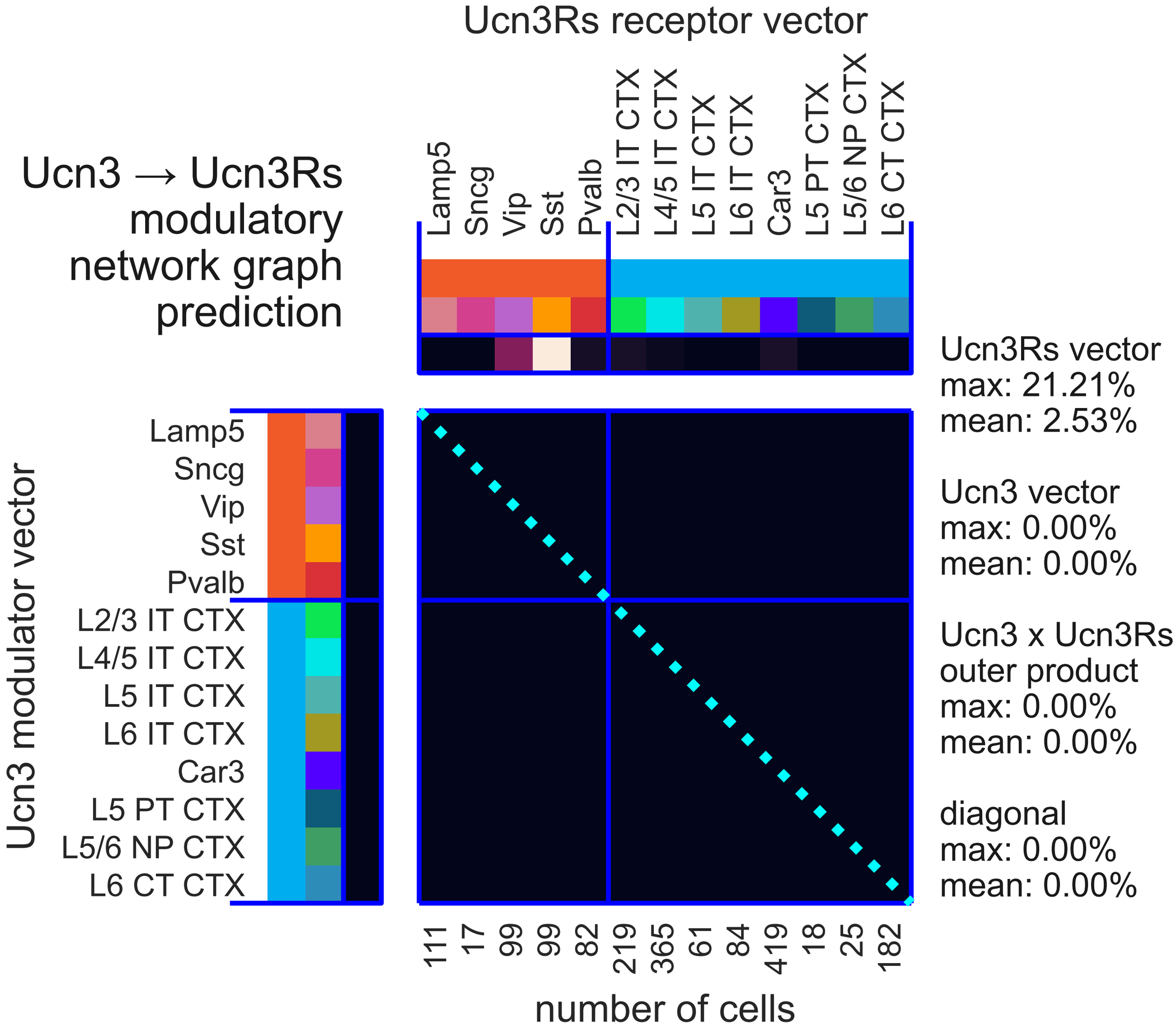
Ucn3Rs vector
max: 20.99%
mean: 2.35%

Ucn3 vector
max: 0.00%
mean: 0.00%

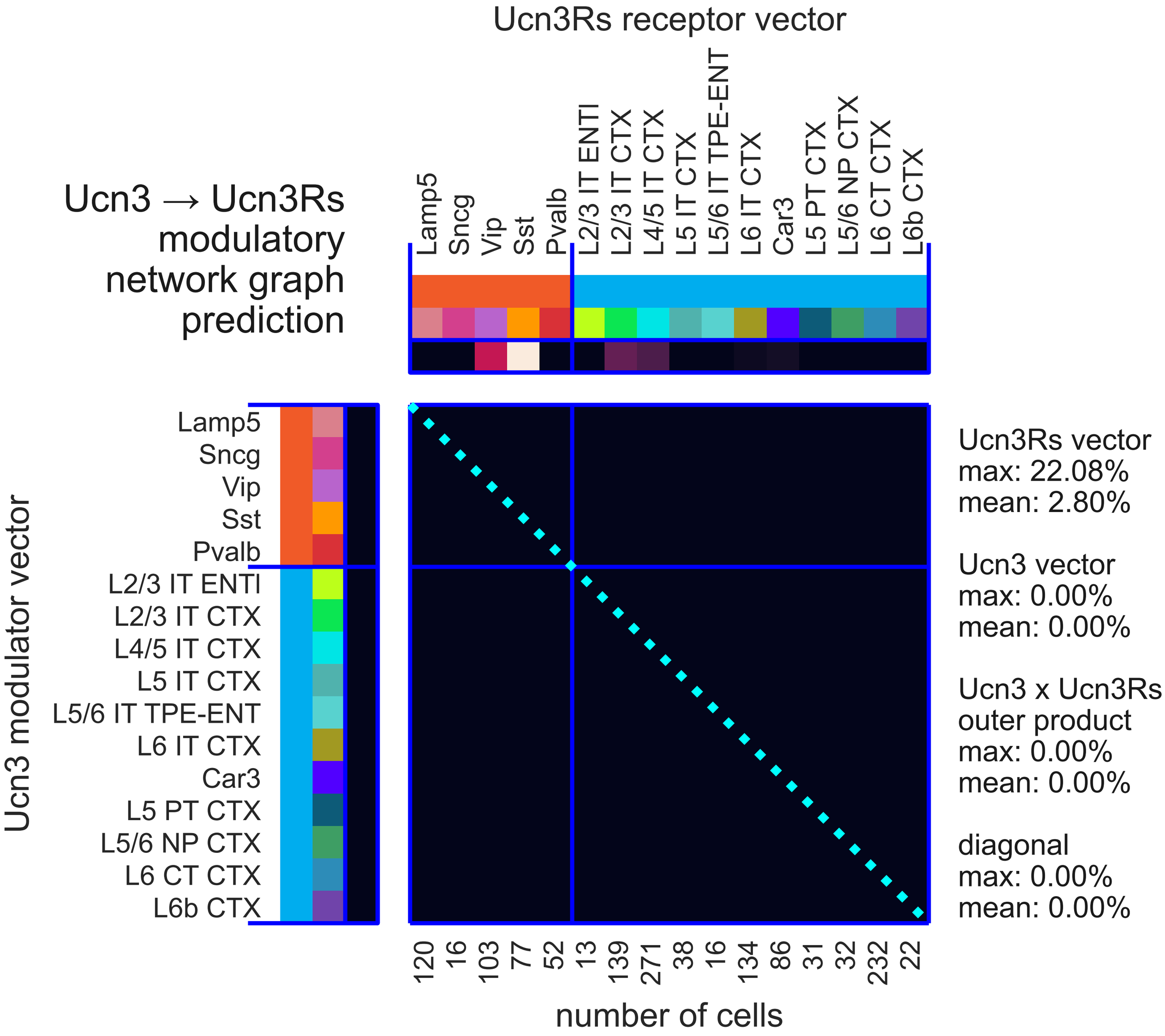
Ucn3 x Ucn3Rs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

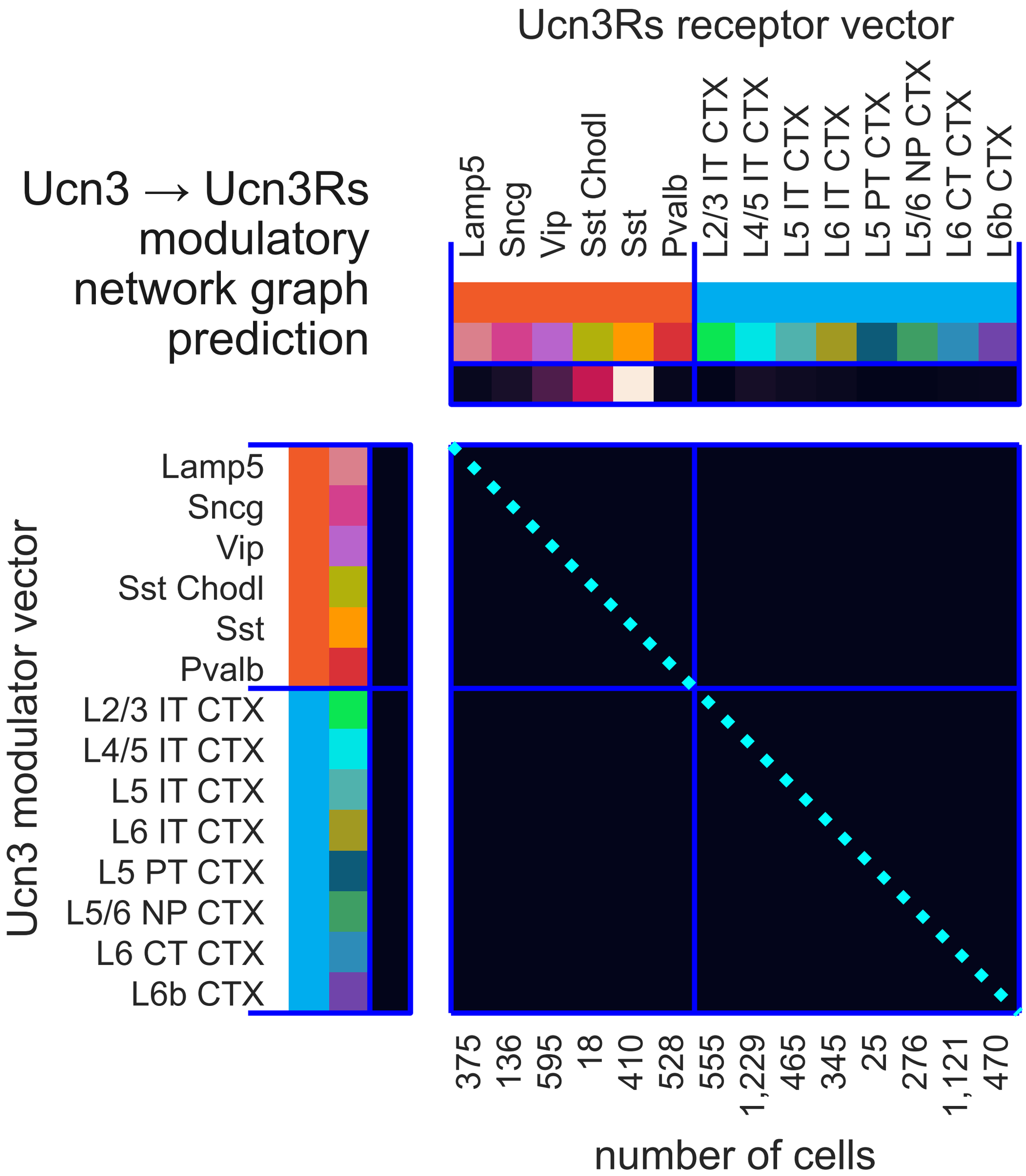
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



Y21ss thr=10 sn:12402
Gustatory Cortex (GU)



Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



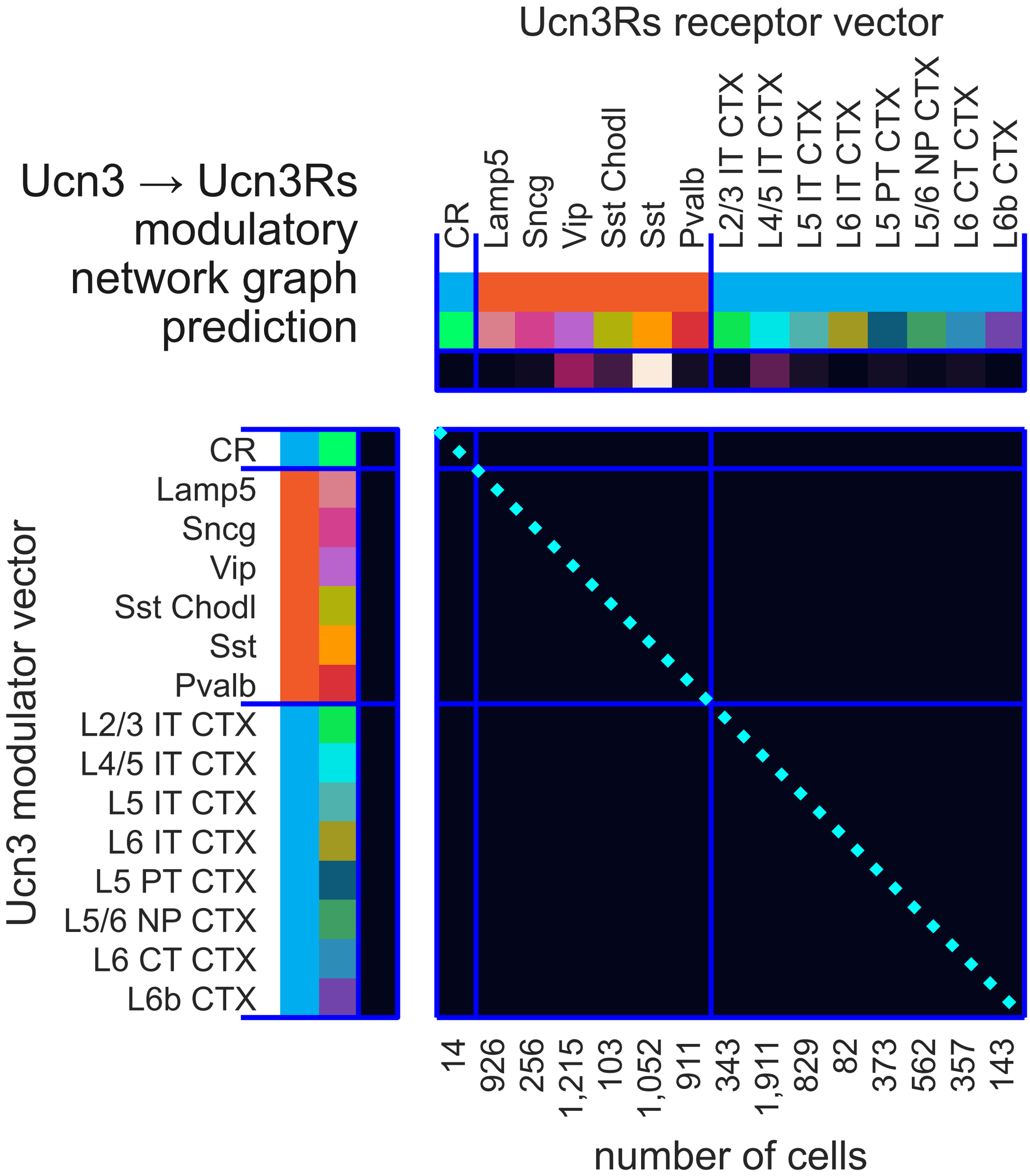
Ucn3Rs vector
max: 11.46%
mean: 1.59%

Ucn3 vector
max: 0.00%
mean: 0.00%

Ucn3 x Ucn3Rs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



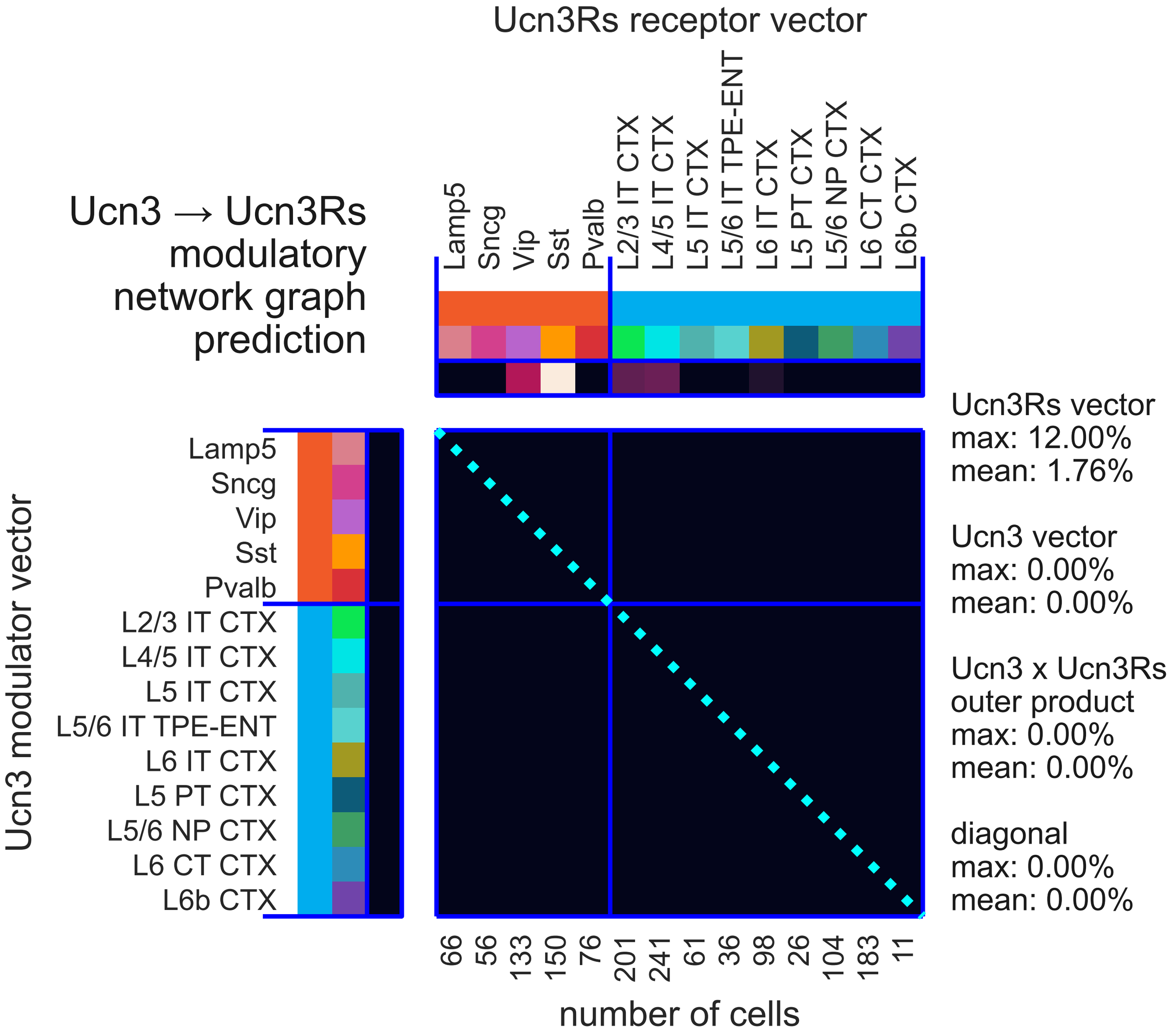
Ucn3Rs vector
max: 11.12%
mean: 1.56%

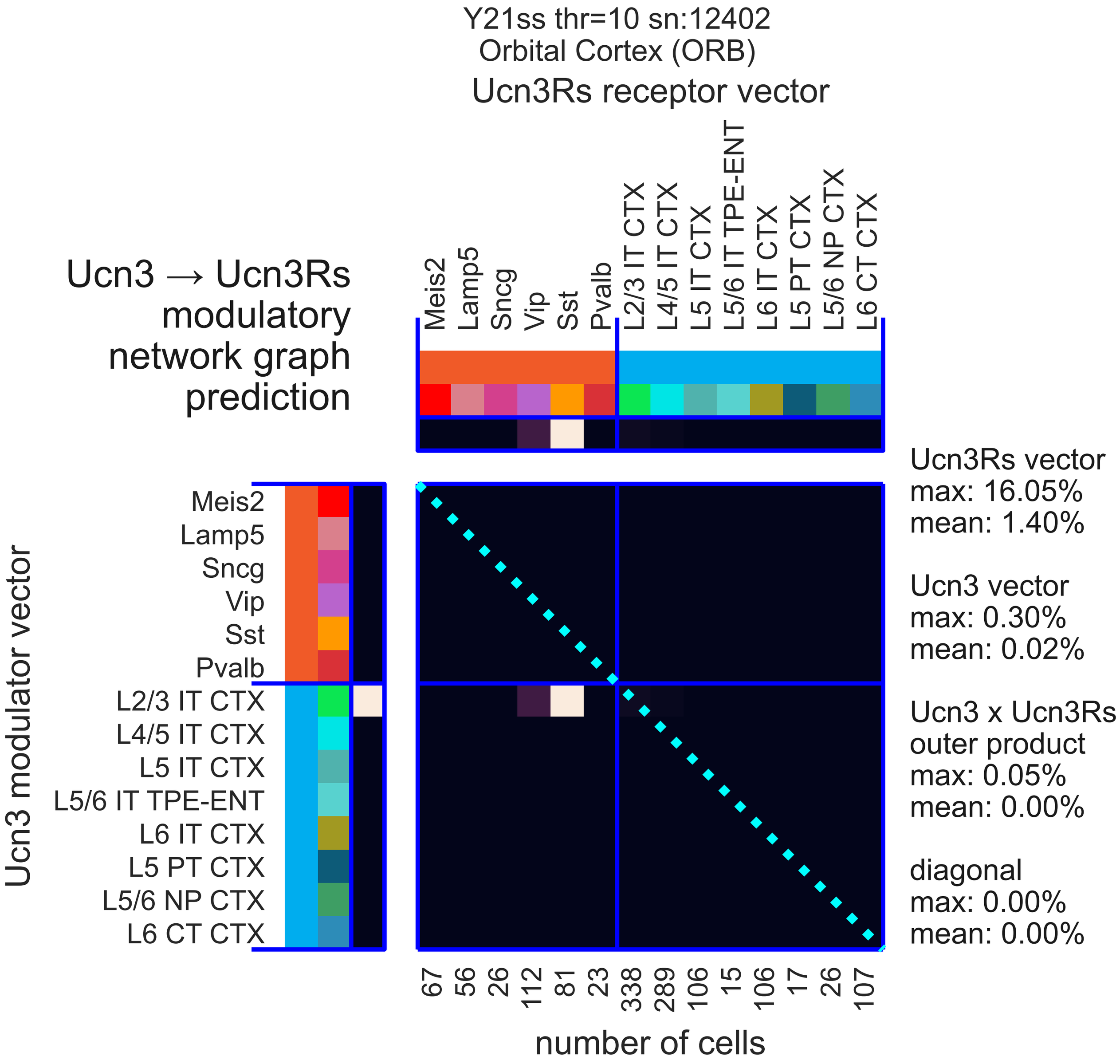
Ucn3 vector
max: 0.00%
mean: 0.00%

Ucn3 x Ucn3Rs
outer product
max: 0.00%
mean: 0.00%

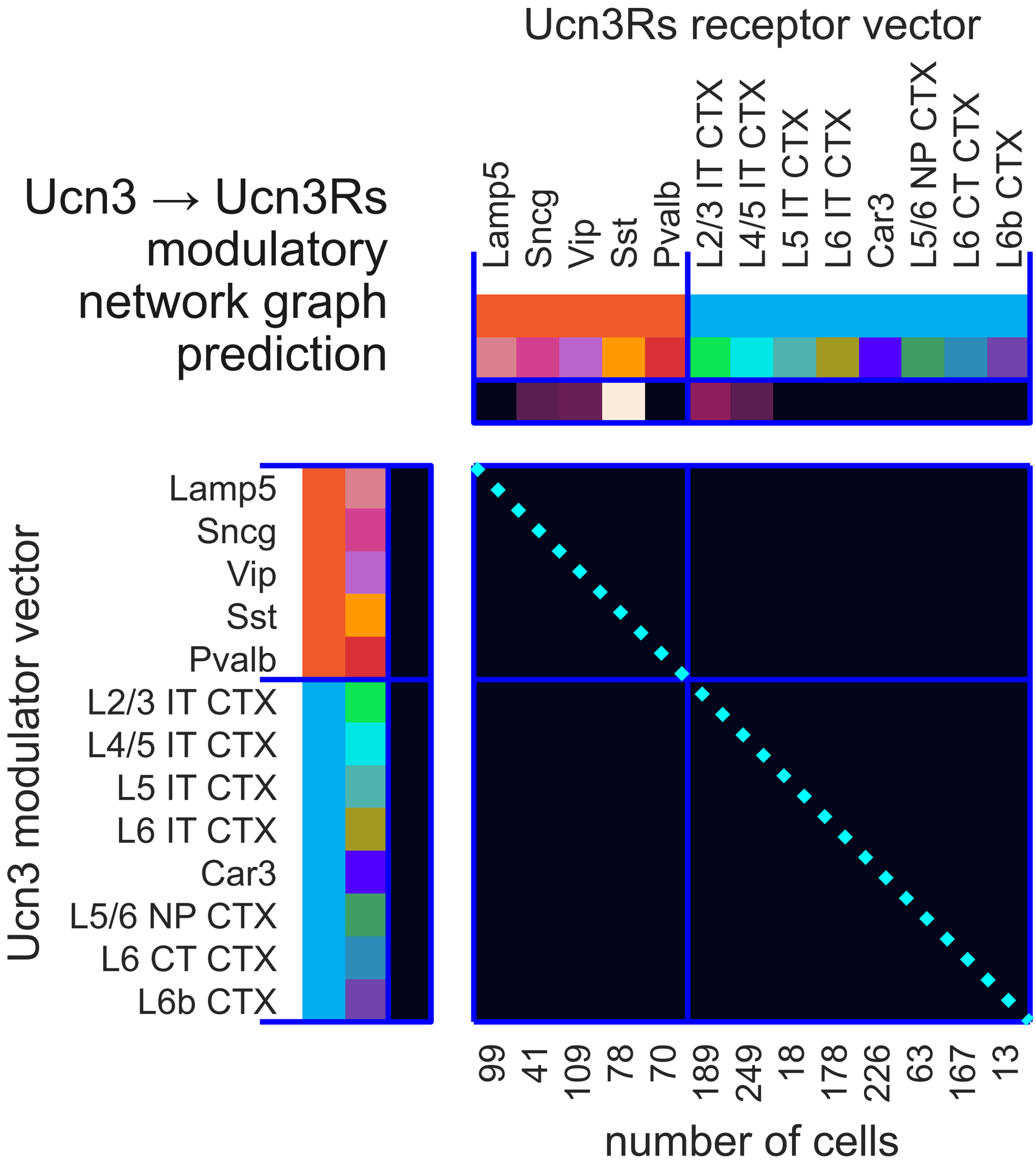
diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)




Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
Ucn3Rs receptor vector
Ucn3 → Ucn3Rs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Ucn3 modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
Ucn3Rs vector
max: 16.05%
mean: 1.40%
Ucn3 vector
max: 0.30%
mean: 0.02%
Ucn3 x Ucn3Rs
outer product
max: 0.05%
mean: 0.00%
diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



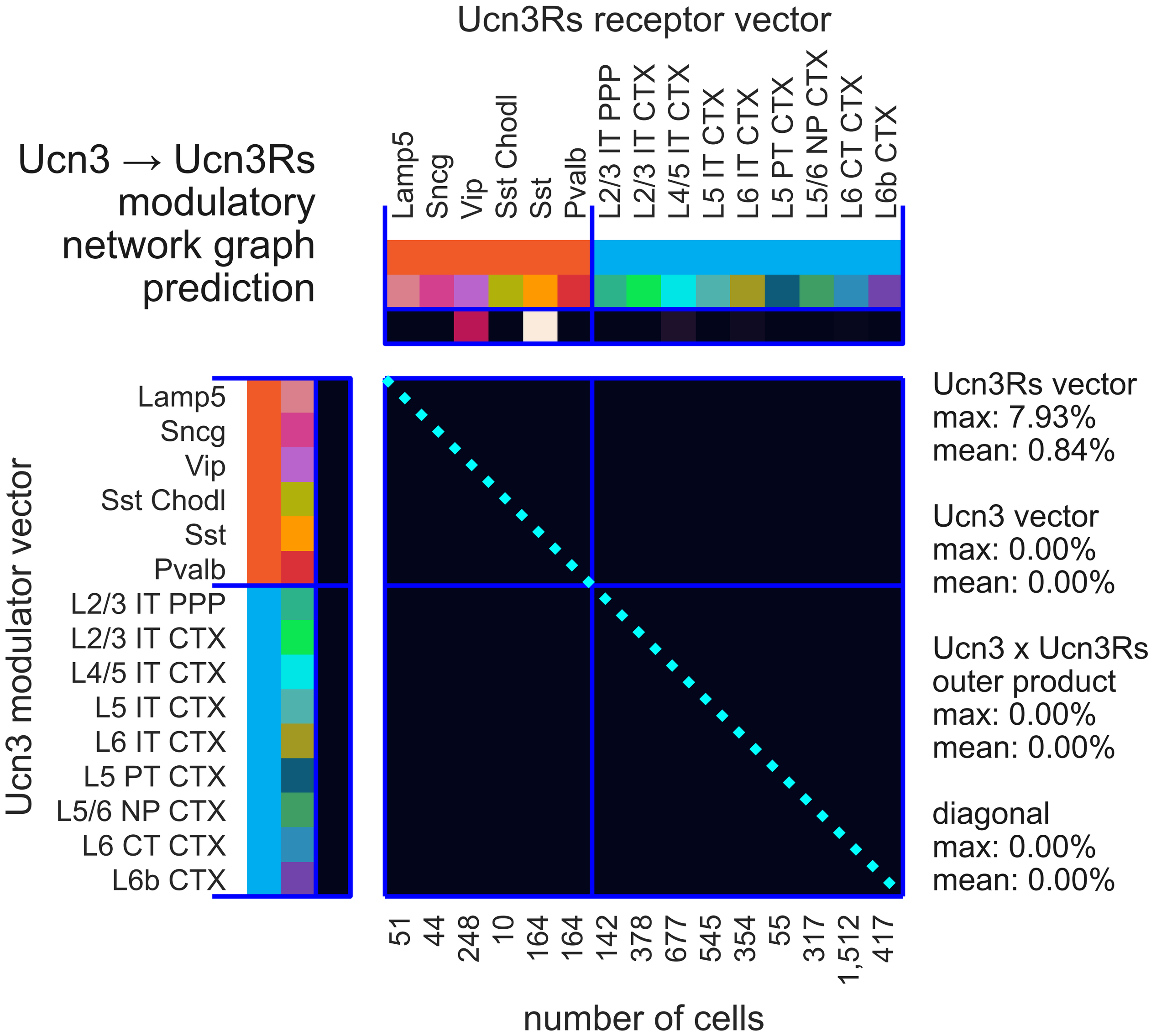
Ucn3Rs vector
max: 10.26%
mean: 1.66%

Ucn3 vector
max: 0.00%
mean: 0.00%

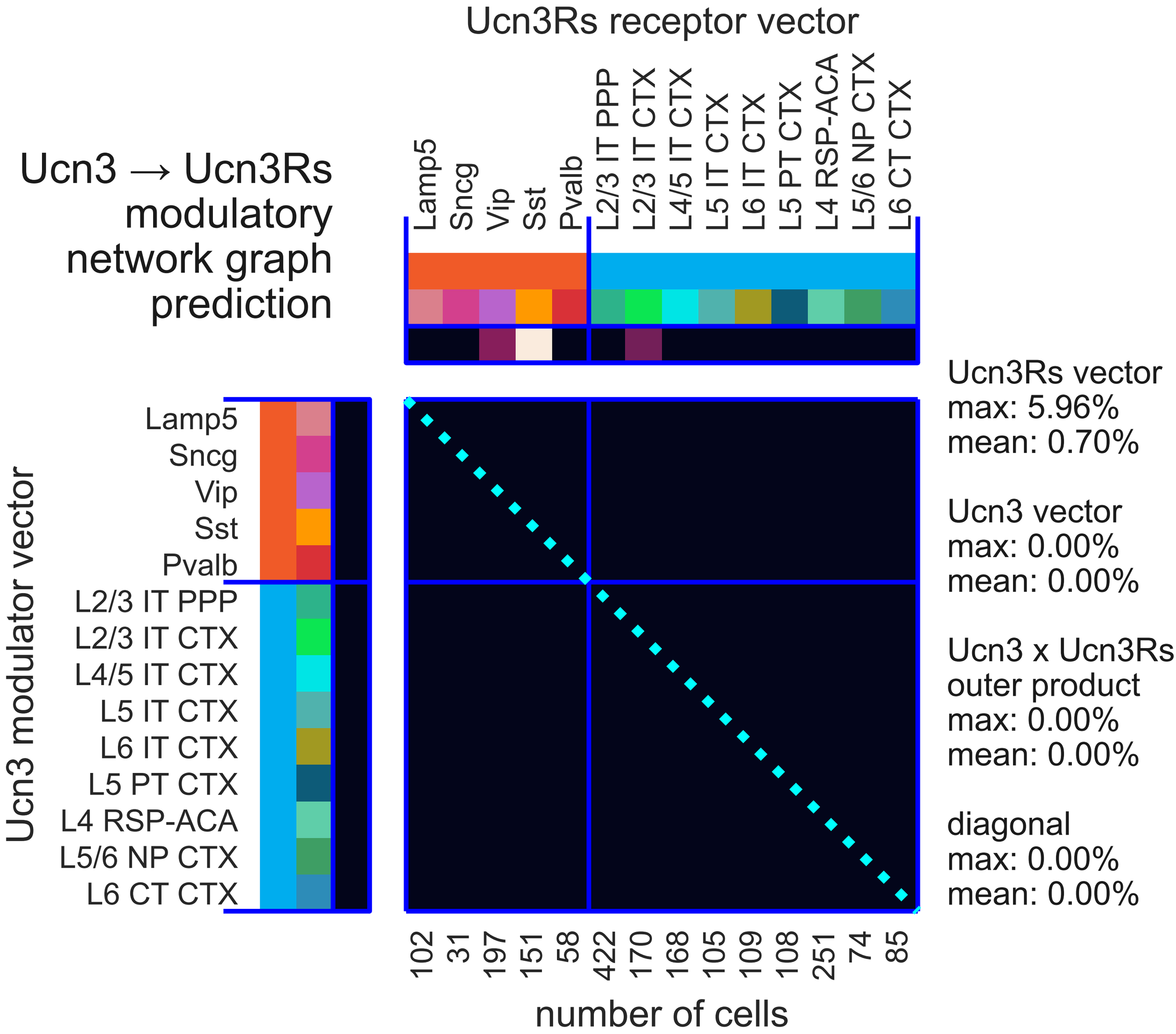
Ucn3 x Ucn3Rs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

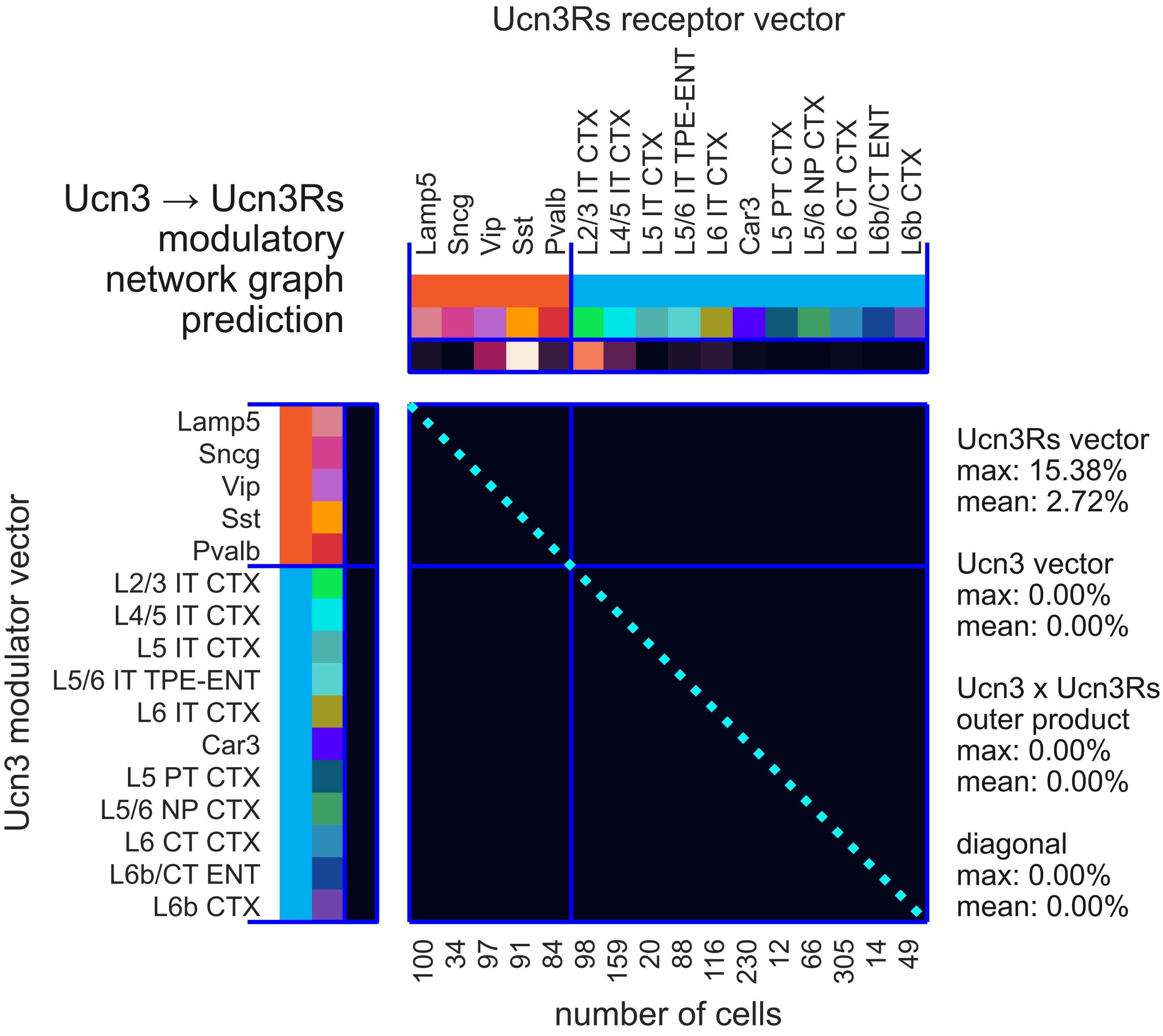
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)



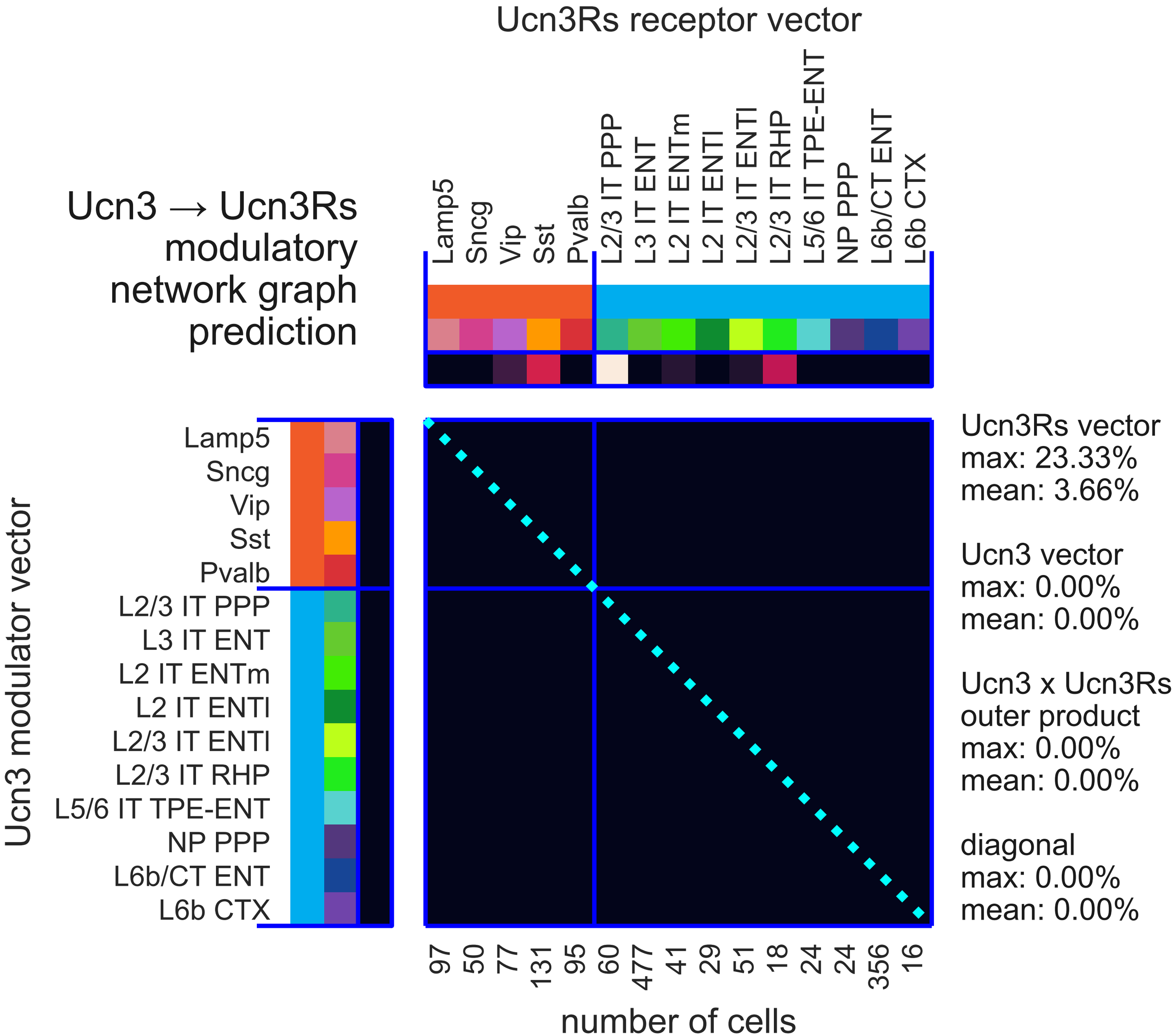
Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)



Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

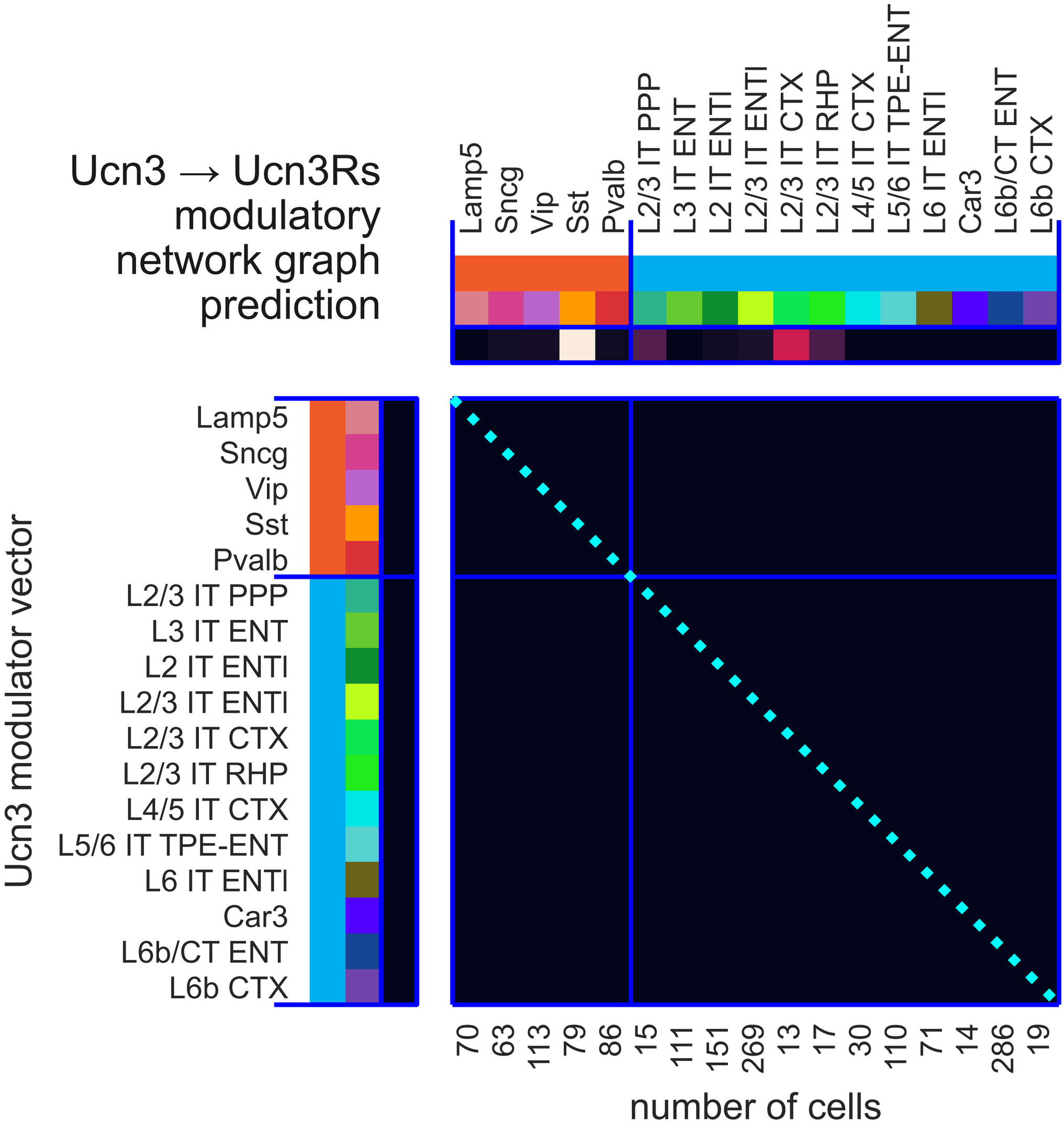


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTl)

Ucn3 → Ucn3Rs
modulatory
network graph
prediction



Ucn3Rs vector
max: 30.38%
mean: 3.91%

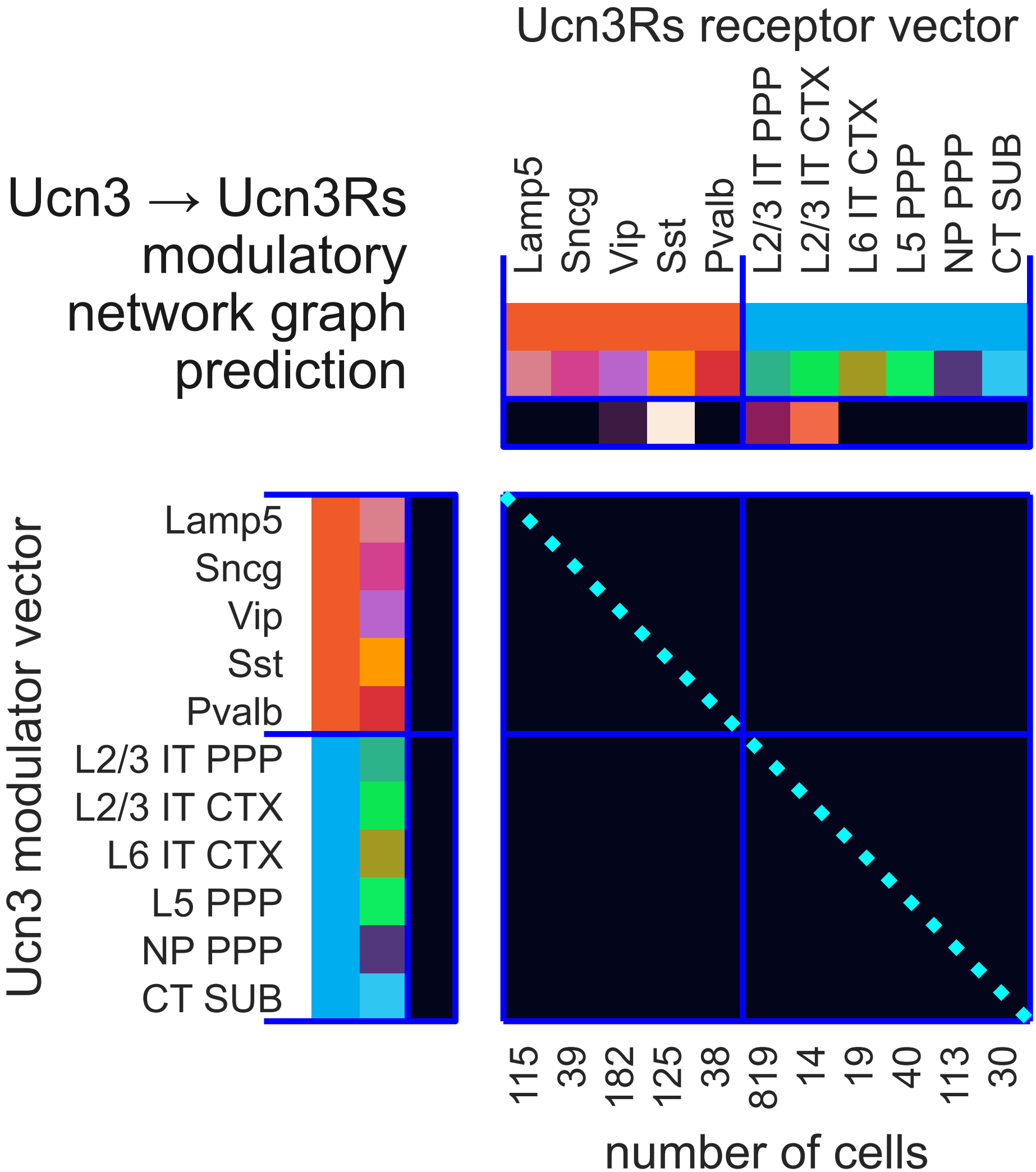
Ucn3 vector
max: 0.00%
mean: 0.00%

Ucn3 x Ucn3Rs
outer product
max: 0.00%
mean: 0.00%

diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

Ucn3 → Ucn3Rs
modulatory
network graph
prediction



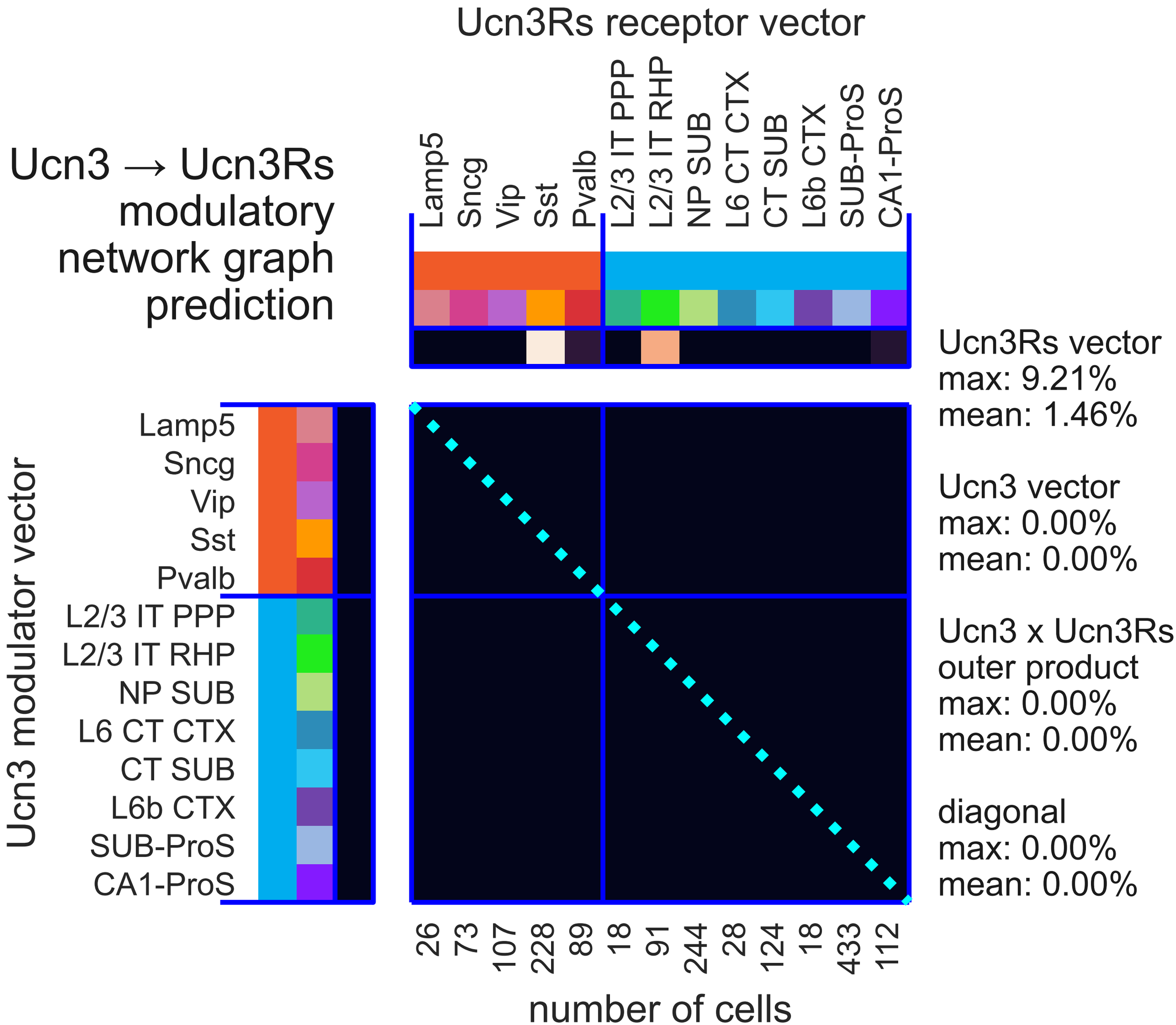
Ucn3Rs vector
max: 10.40%
mean: 2.08%

Ucn3 vector
max: 0.00%
mean: 0.00%

Ucn3 x Ucn3Rs
outer product
max: 0.00%
mean: 0.00%

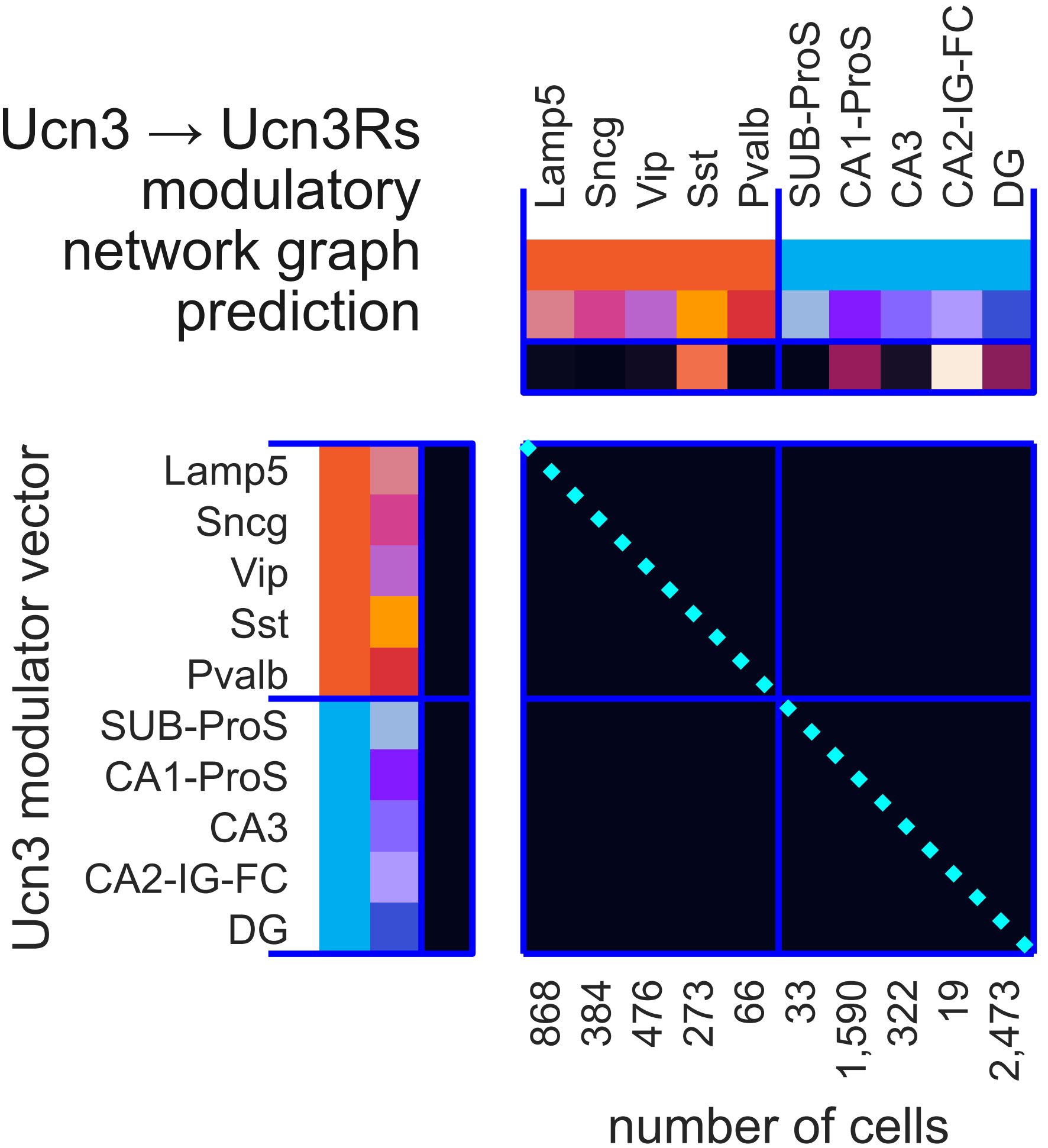
diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



Y21ss thr=10 sn:12402
Hippocampus (HIP)

Ucn3 → Ucn3Rs
modulatory
network graph
prediction



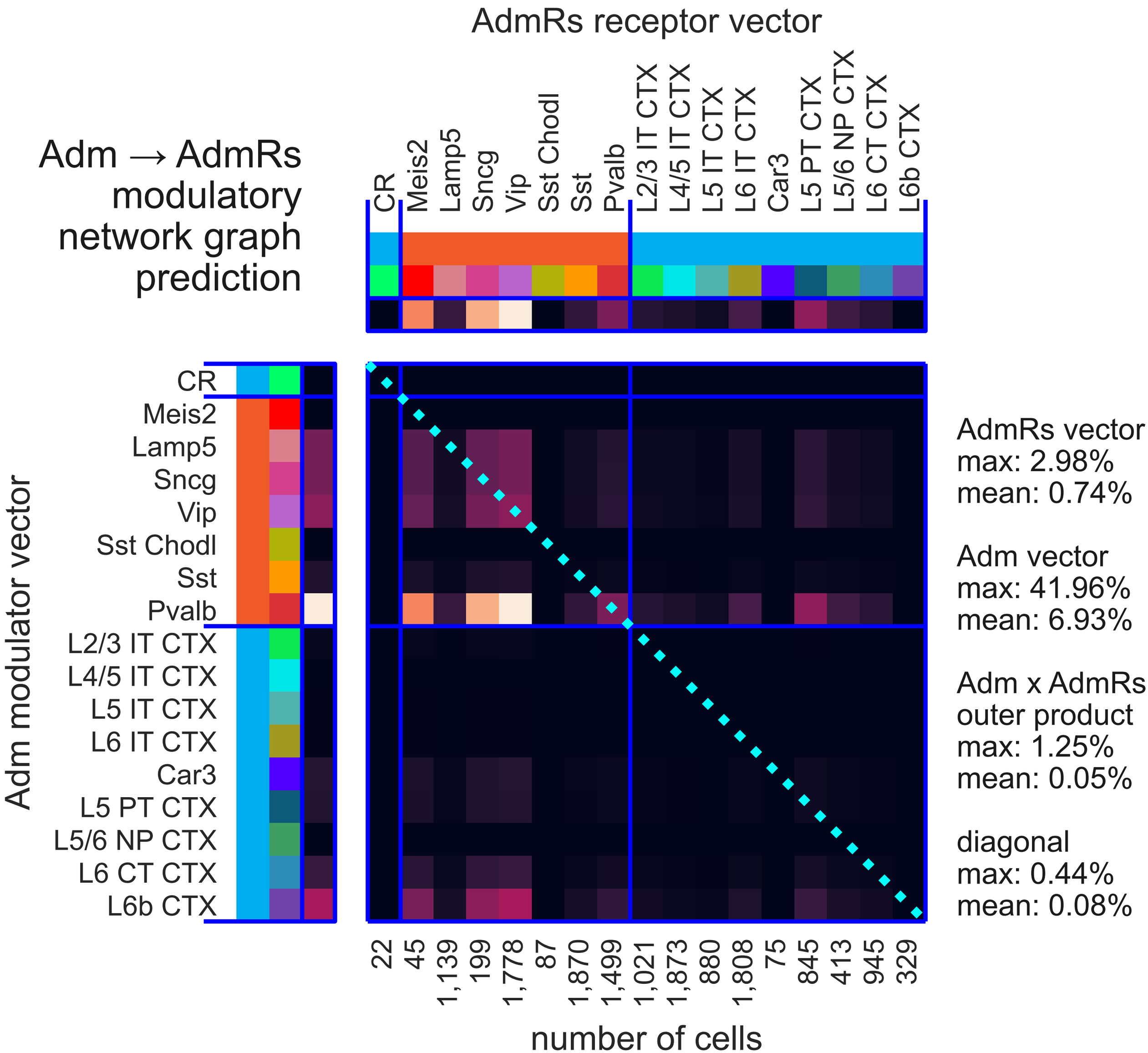
Ucn3Rs vector
max: 5.26%
mean: 1.34%

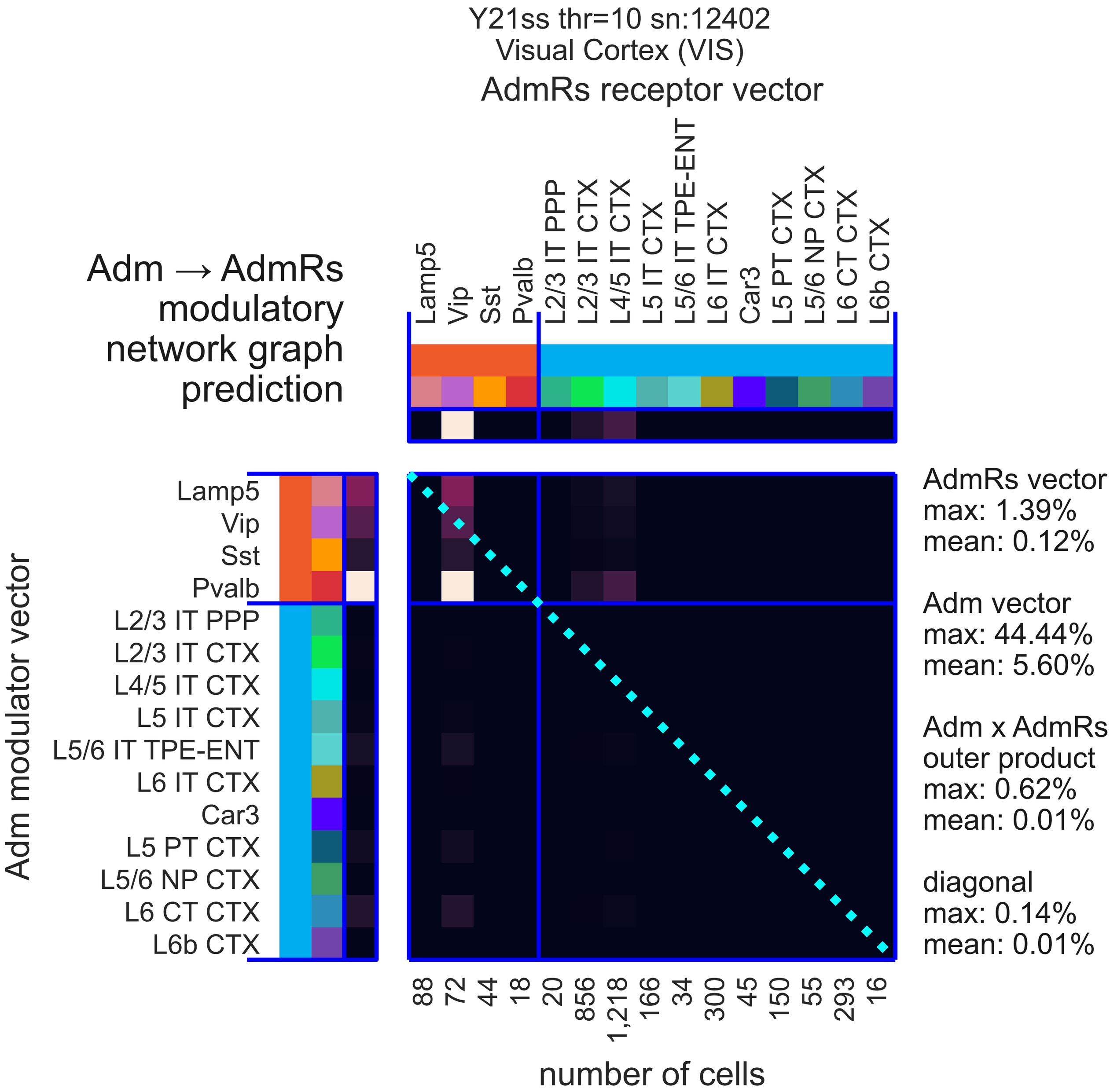
Ucn3 vector
max: 0.00%
mean: 0.00%

Ucn3 x Ucn3Rs
outer product
max: 0.00%
mean: 0.00%

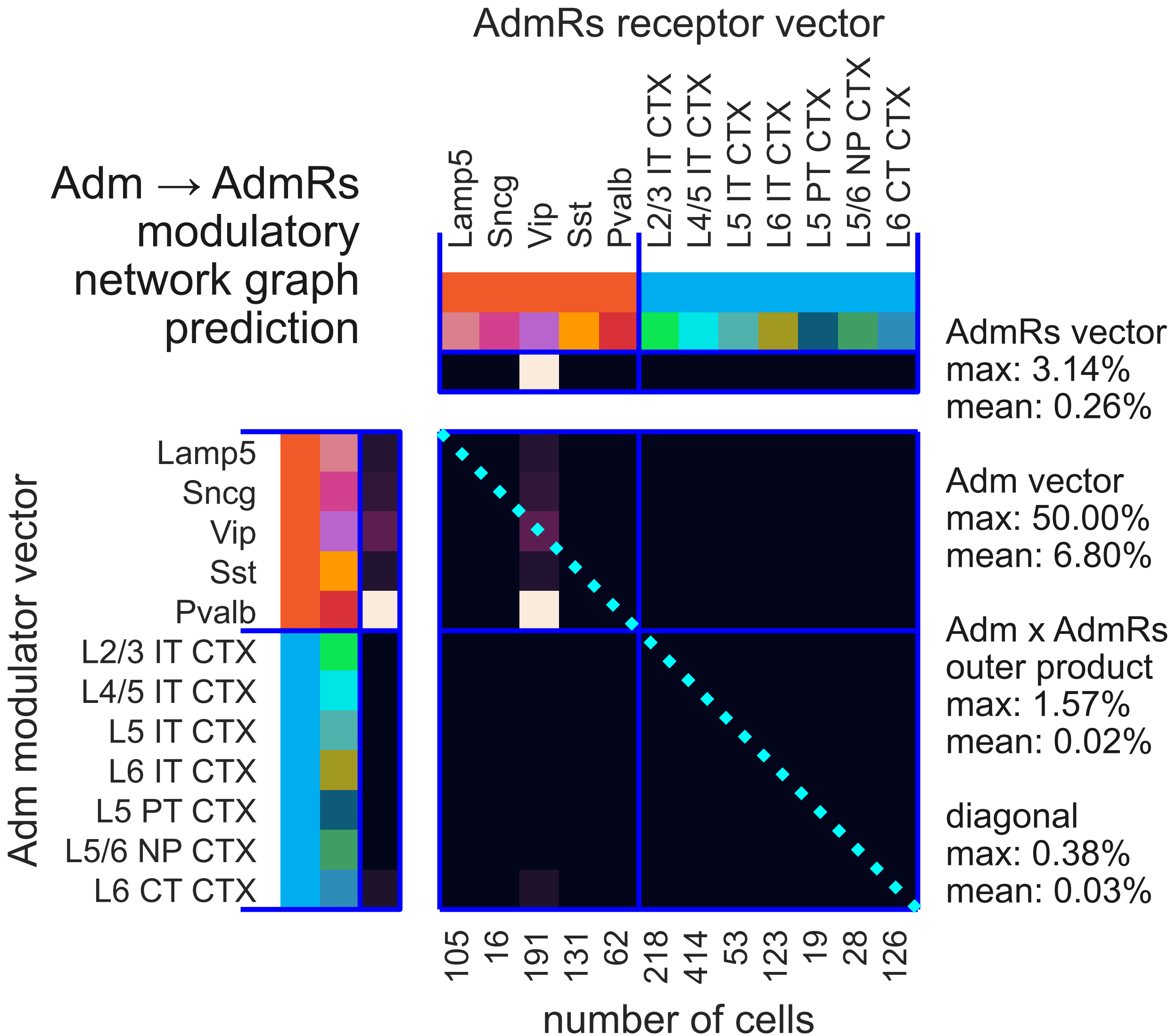
diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)

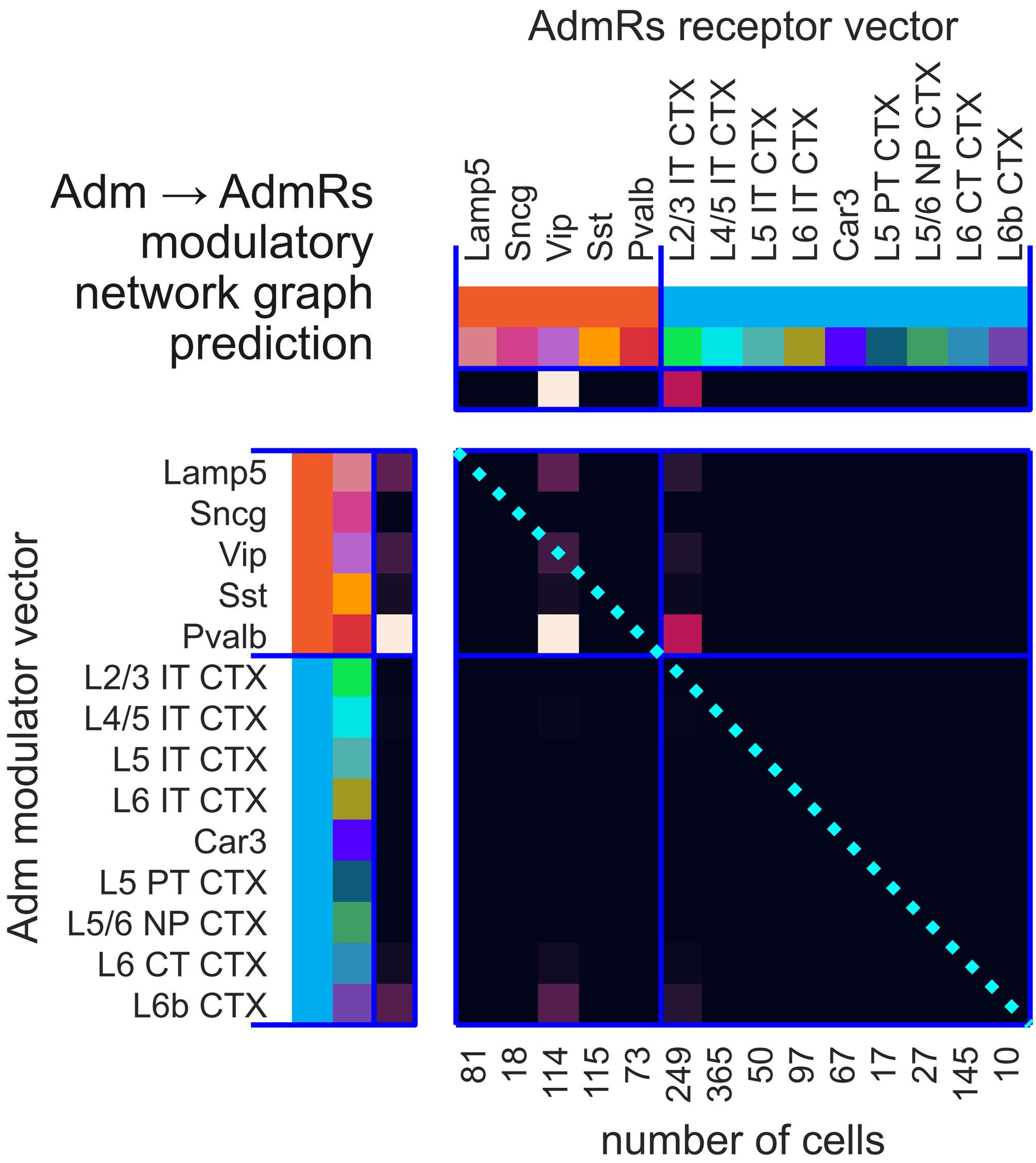



Y21ss thr=10 sn:12402
Visual Cortex (VIS)
AdmRs receptor vector
Adm → AdmRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Adm modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
AdmRs vector
max: 1.39%
mean: 0.12%
Adm vector
max: 44.44%
mean: 5.60%
Adm x AdmRs
outer product
max: 0.62%
mean: 0.01%
diagonal
max: 0.14%
mean: 0.01%

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)



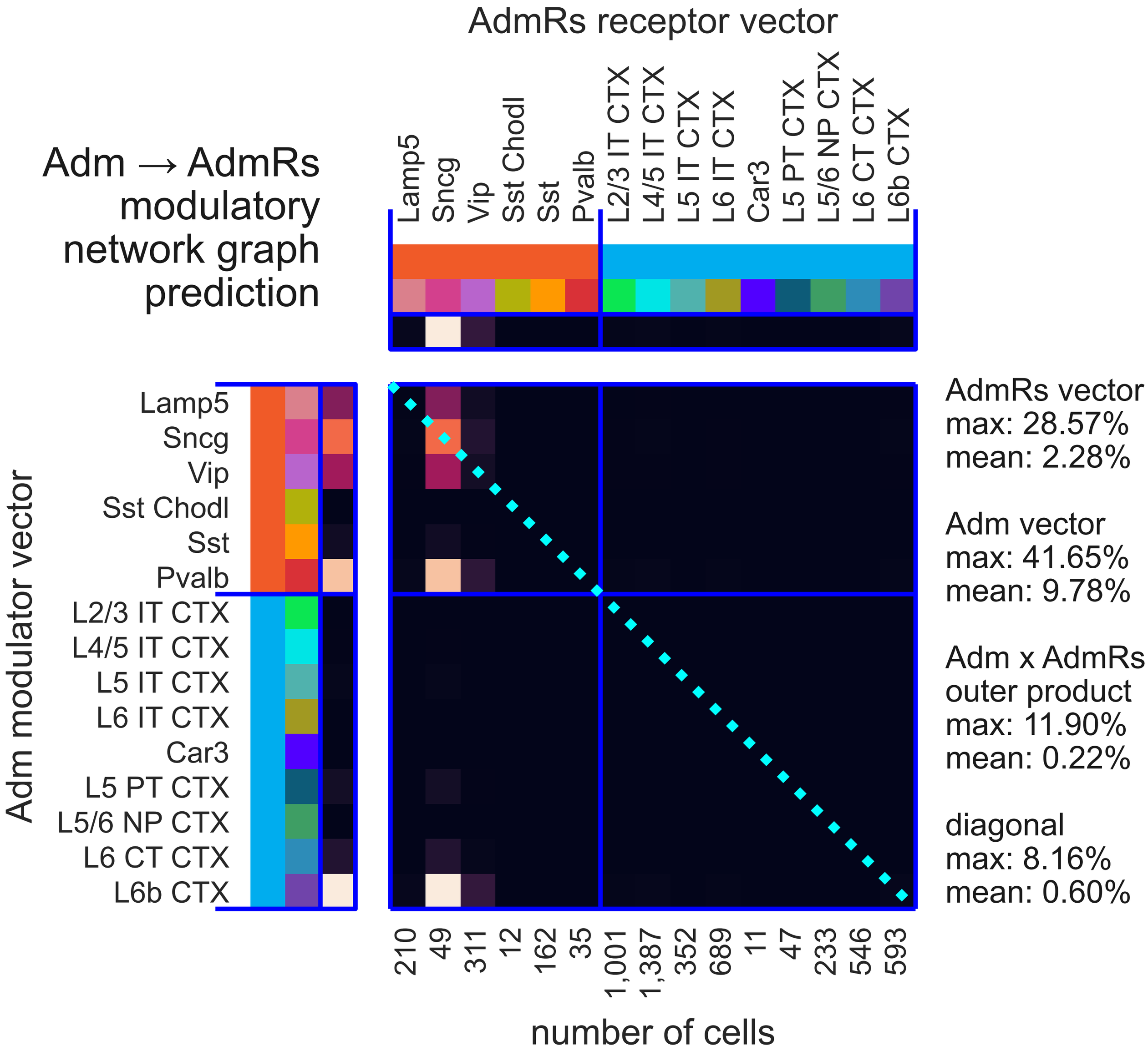
AdmRs vector
max: 0.88%
mean: 0.09%

Adm vector
max: 45.21%
mean: 5.69%

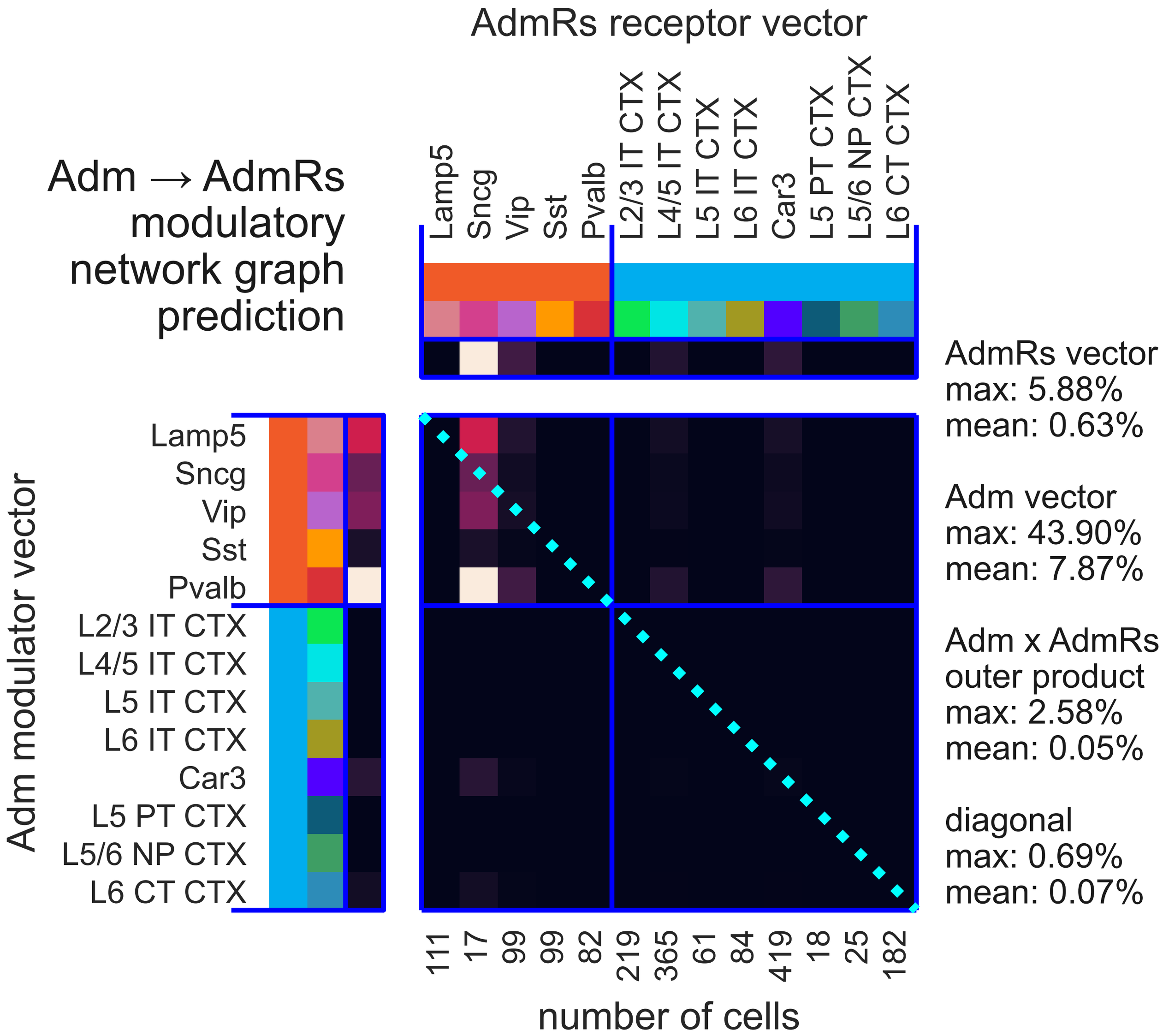
Adm x AdmRs
outer product
max: 0.40%
mean: 0.01%

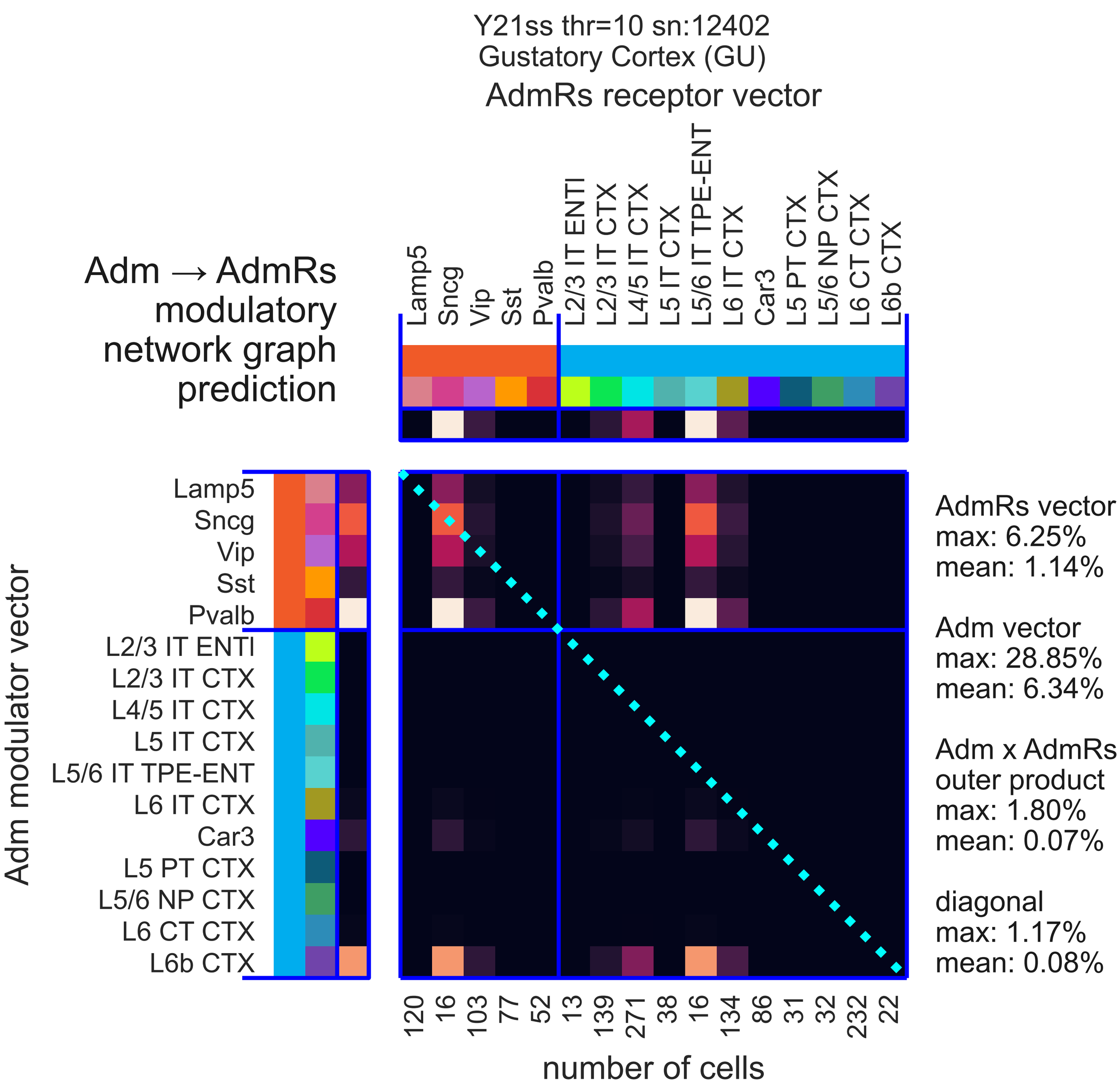
diagonal
max: 0.07%
mean: 0.00%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

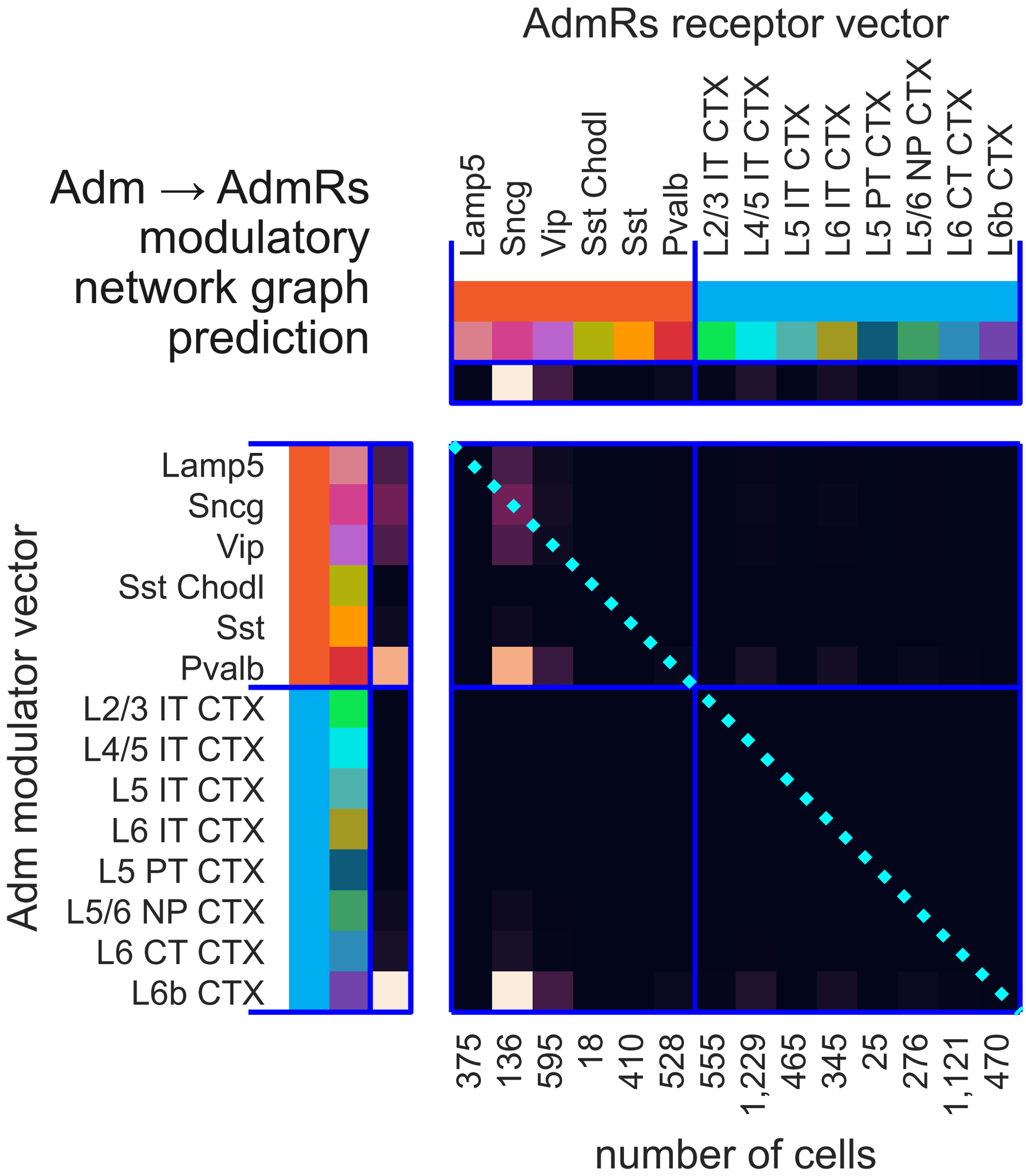


Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)




Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
AdmRs receptor vector
Adm → AdmRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTl
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Adm modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
AdmRs vector
max: 6.25%
mean: 1.14%
Adm vector
max: 28.85%
mean: 6.34%
Adm x AdmRs
outer product
max: 1.80%
mean: 0.07%
diagonal
max: 1.17%
mean: 0.08%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



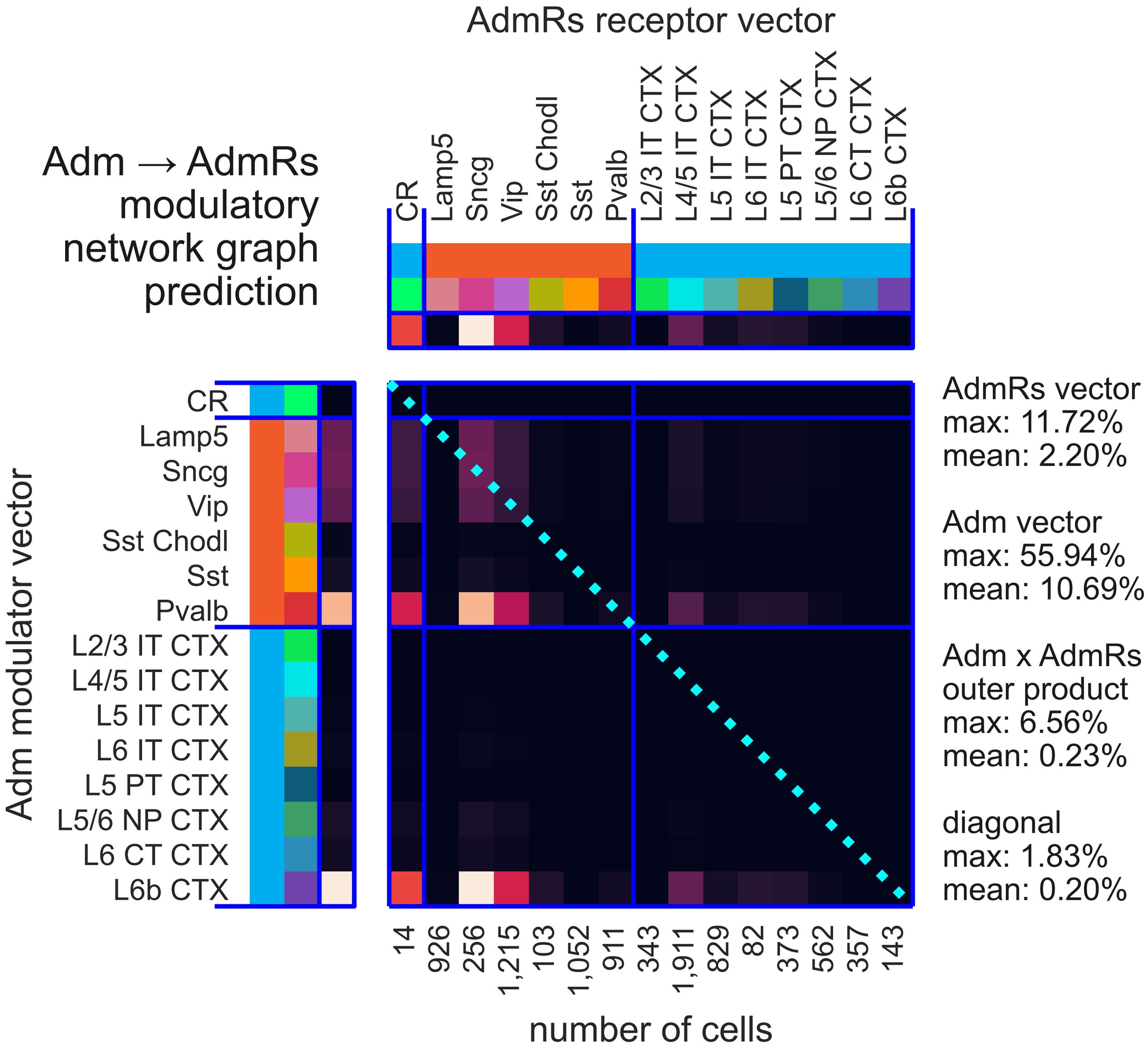
AdmRs vector
max: 15.44%
mean: 1.52%

Adm vector
max: 56.17%
mean: 10.66%

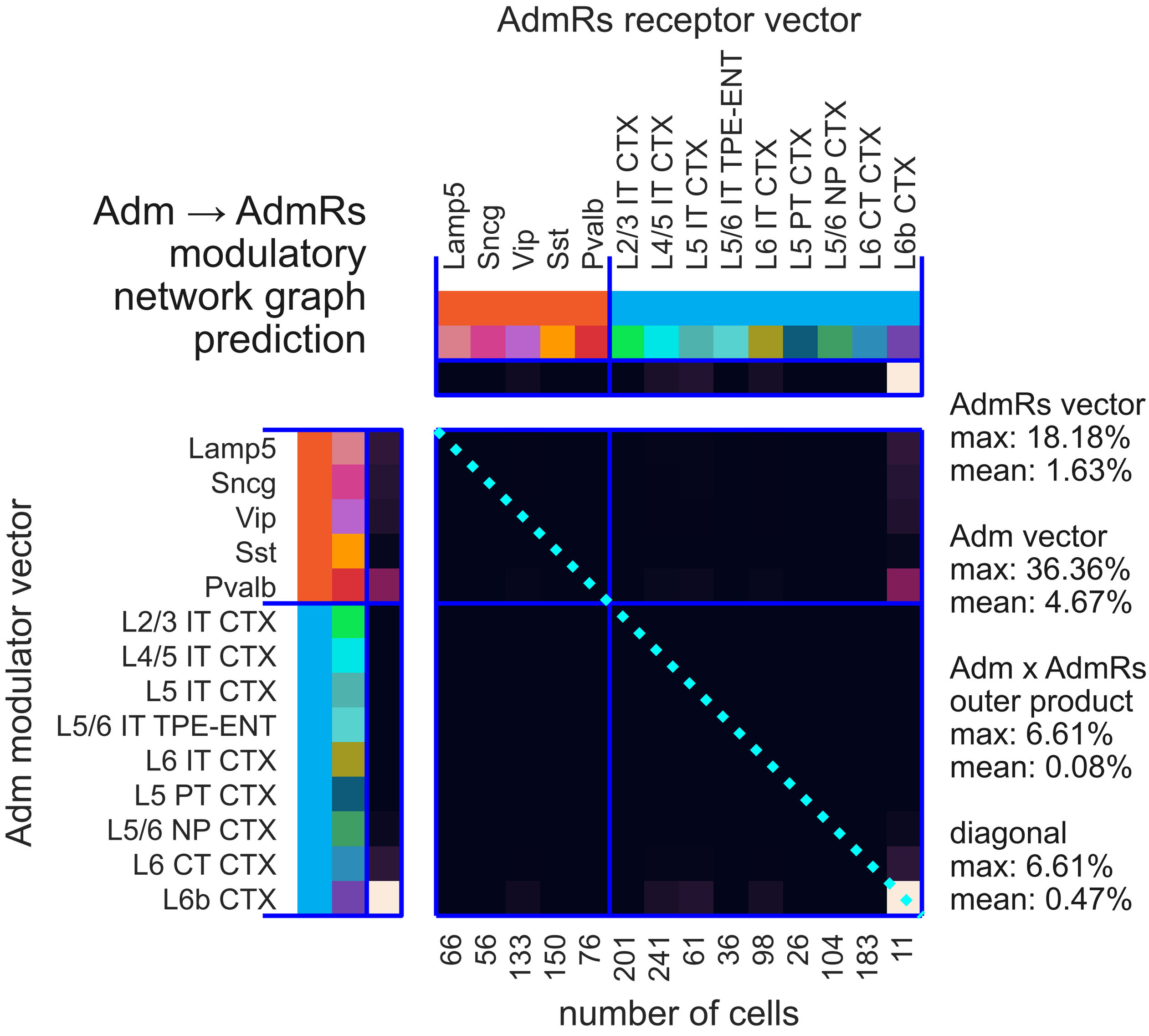
Adm x AdmRs
outer product
max: 8.67%
mean: 0.16%

diagonal
max: 2.50%
mean: 0.21%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



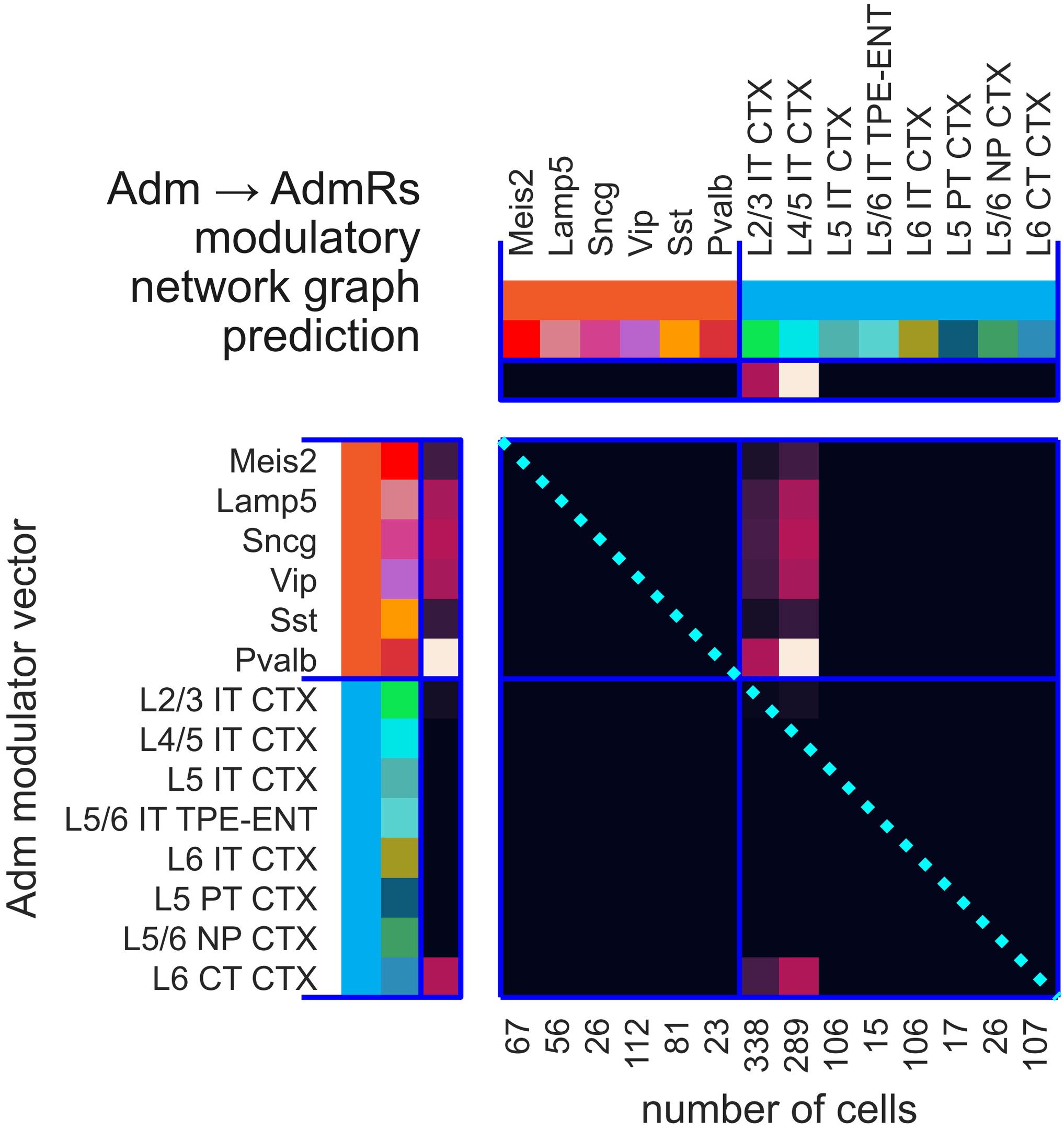
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)



Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

AdmRs receptor vector

Adm → AdmRs modulatory network graph prediction



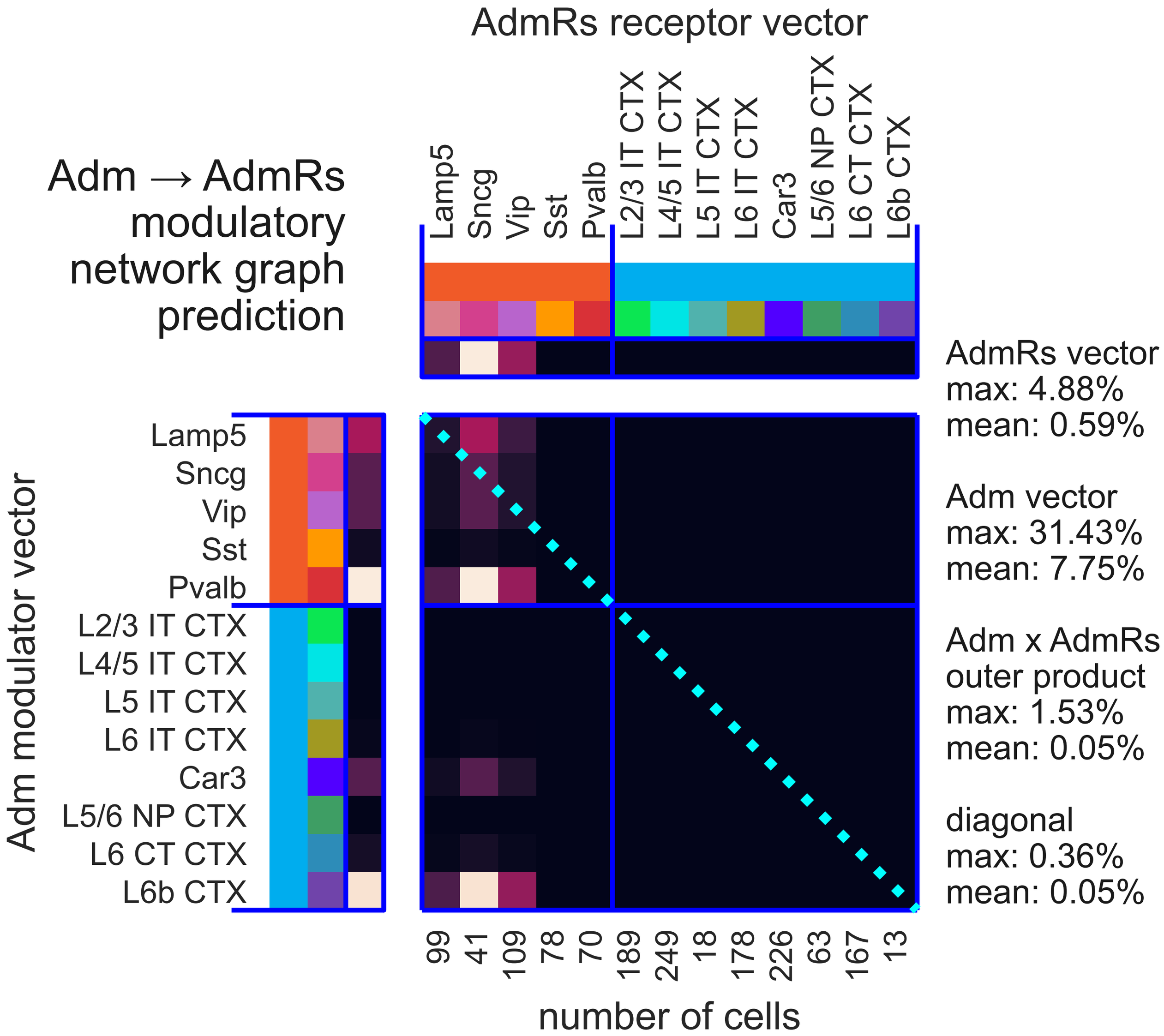
AdmRs vector
max: 0.69%
mean: 0.07%

Adm vector
max: 17.39%
mean: 3.80%

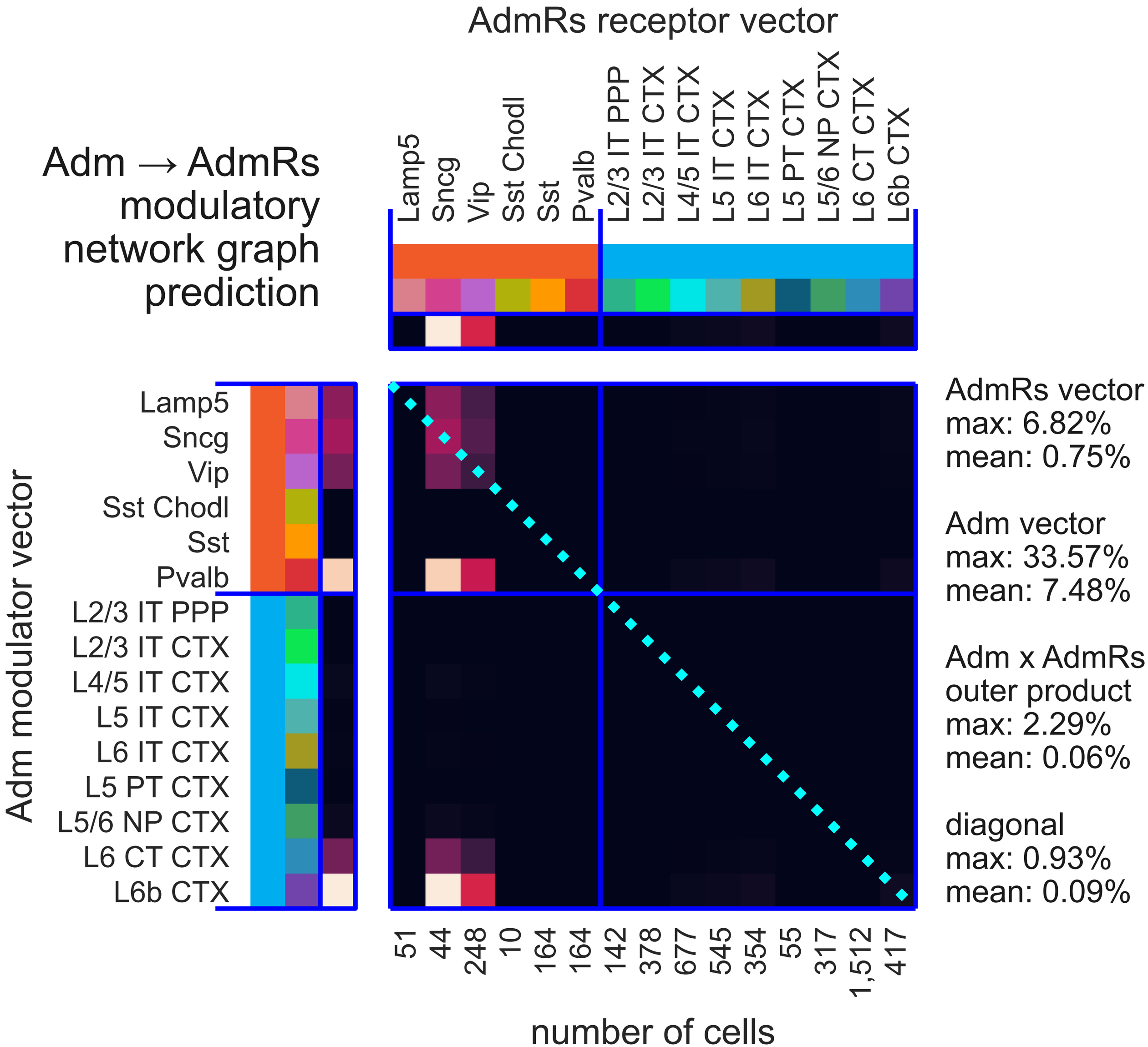
Adm x AdmRs
outer product
max: 0.12%
mean: 0.00%

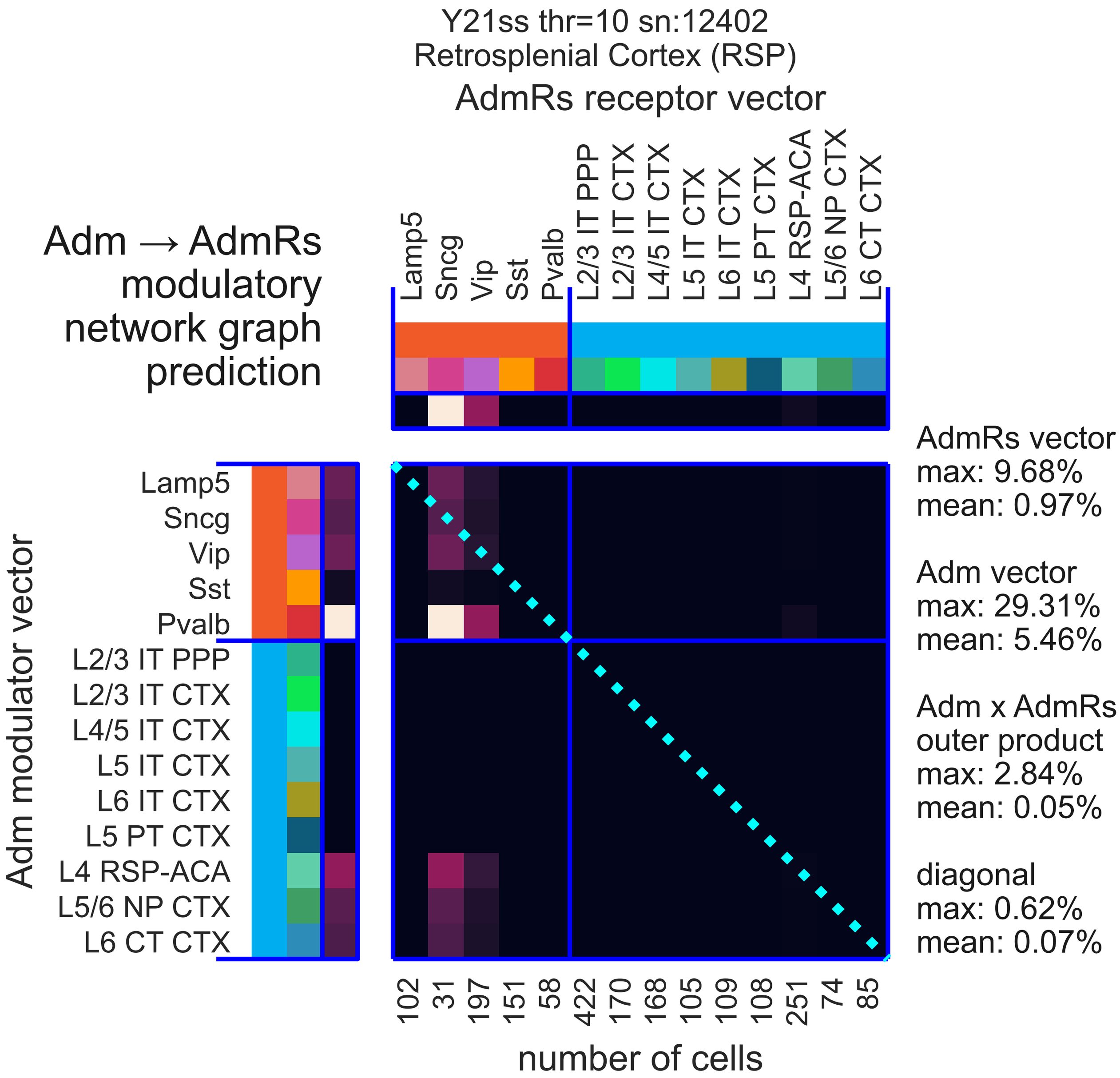
diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

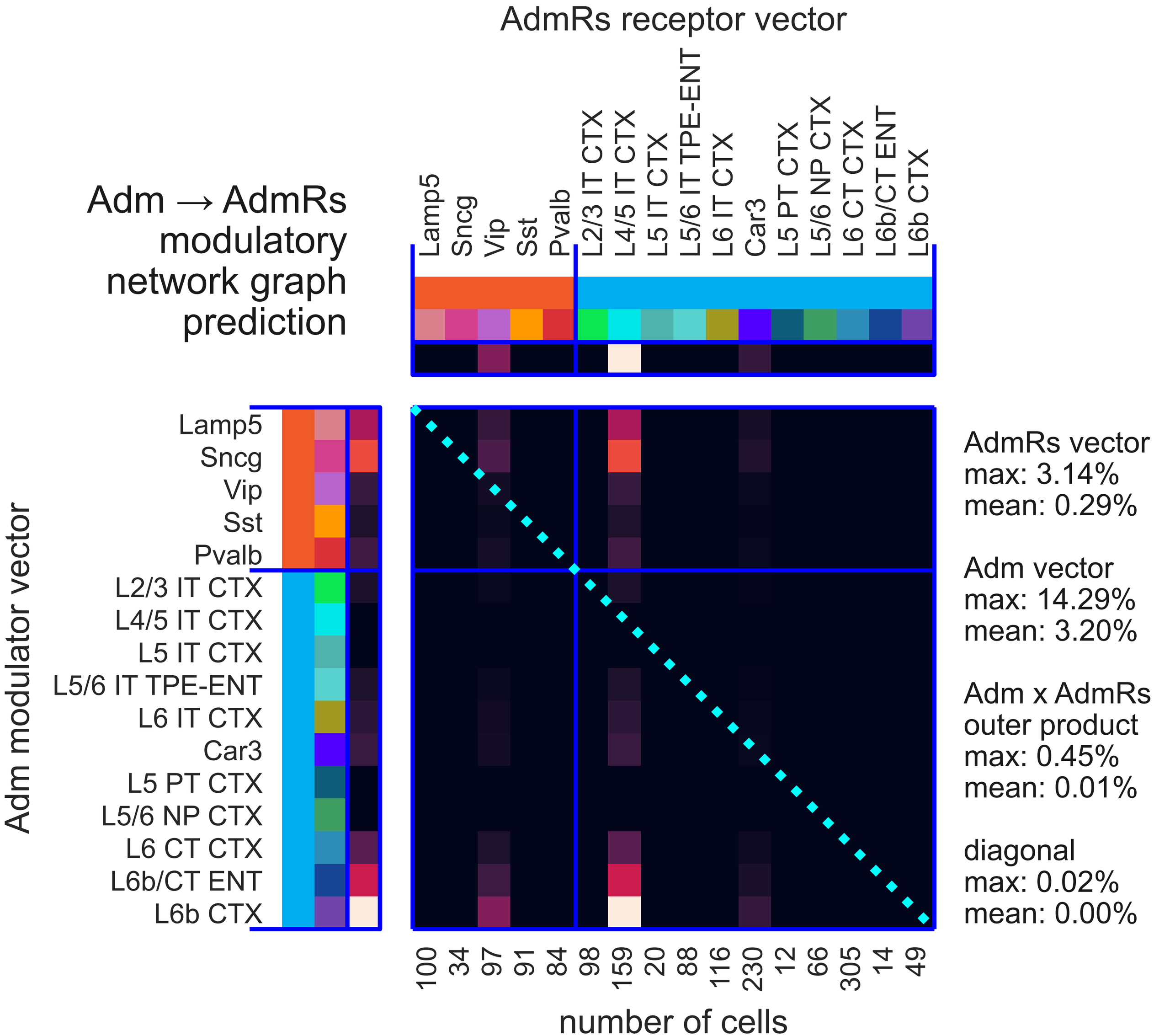


Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

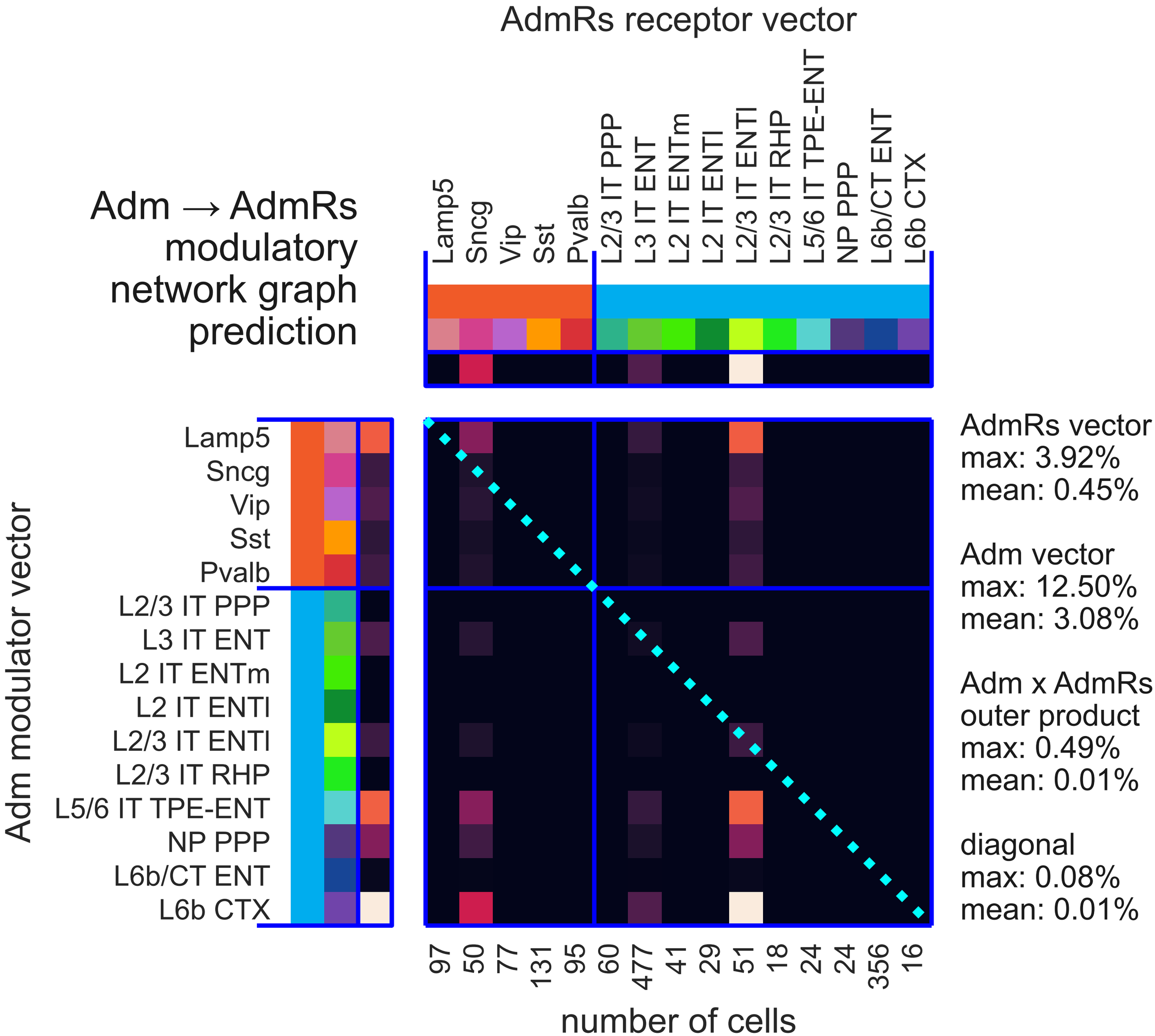



Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
AdmRs receptor vector
Adm → AdmRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Adm modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
AdmRs vector
max: 9.68%
mean: 0.97%
Adm vector
max: 29.31%
mean: 5.46%
Adm x AdmRs
outer product
max: 2.84%
mean: 0.05%
diagonal
max: 0.62%
mean: 0.07%

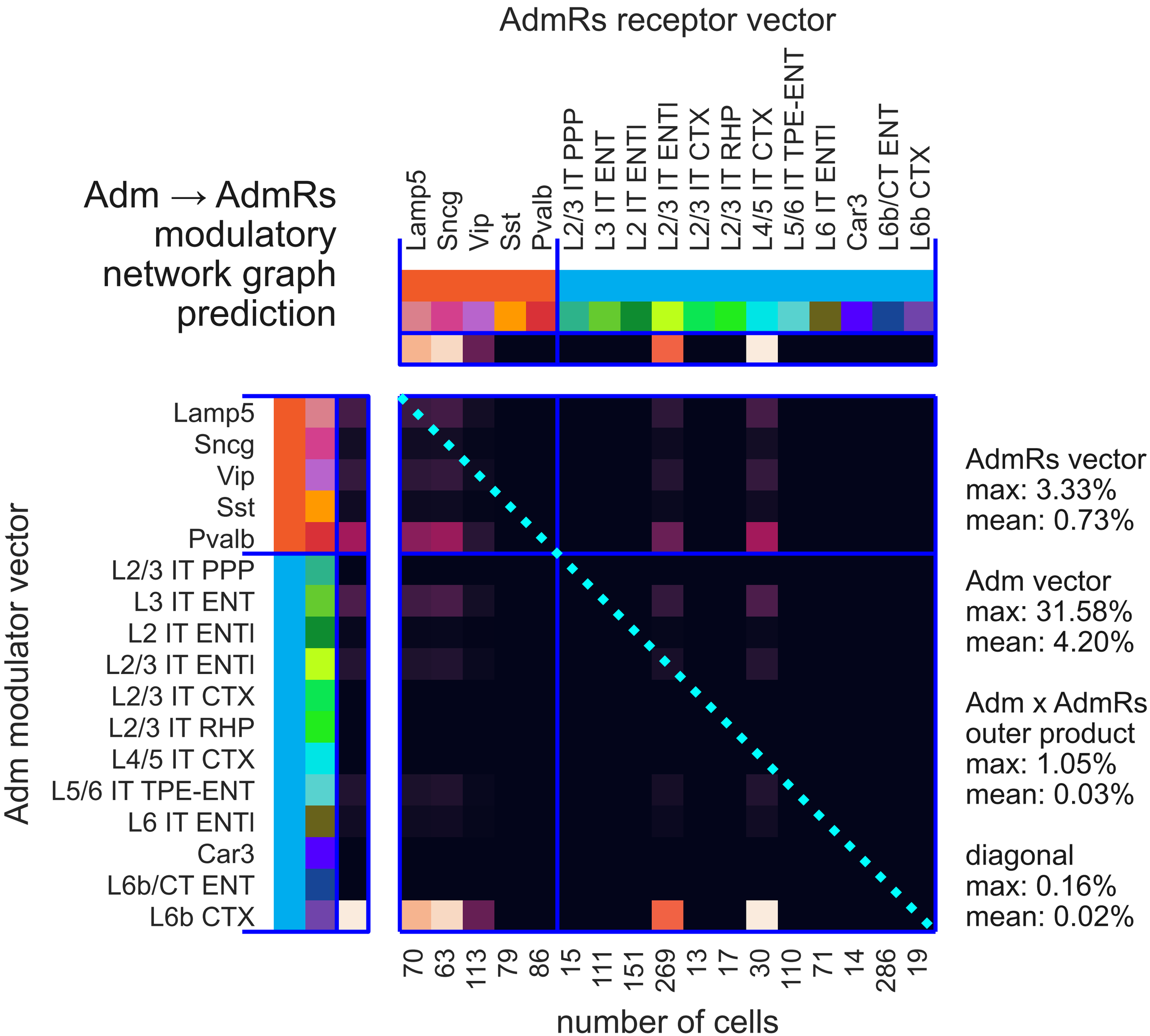
Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)



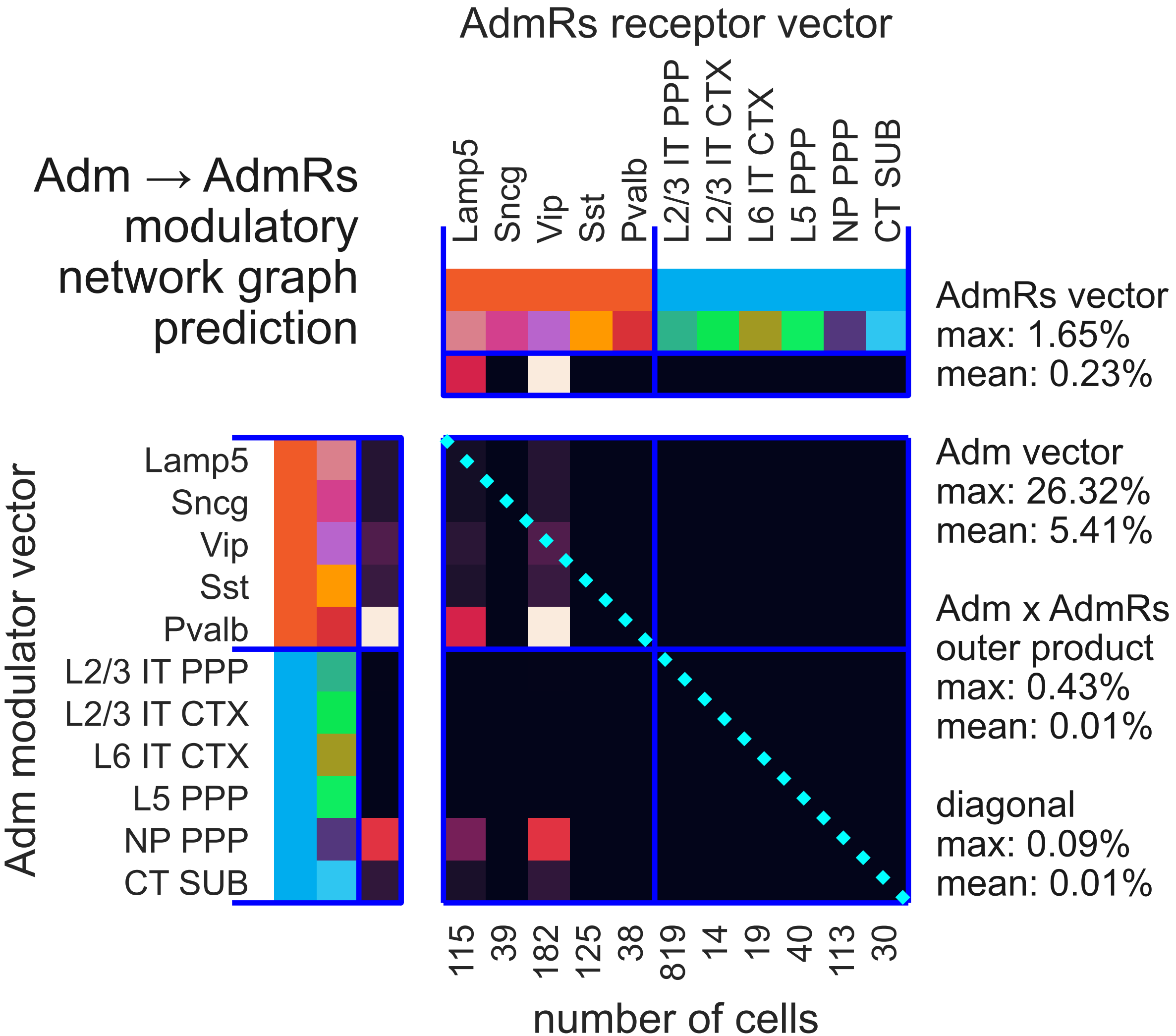
Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)



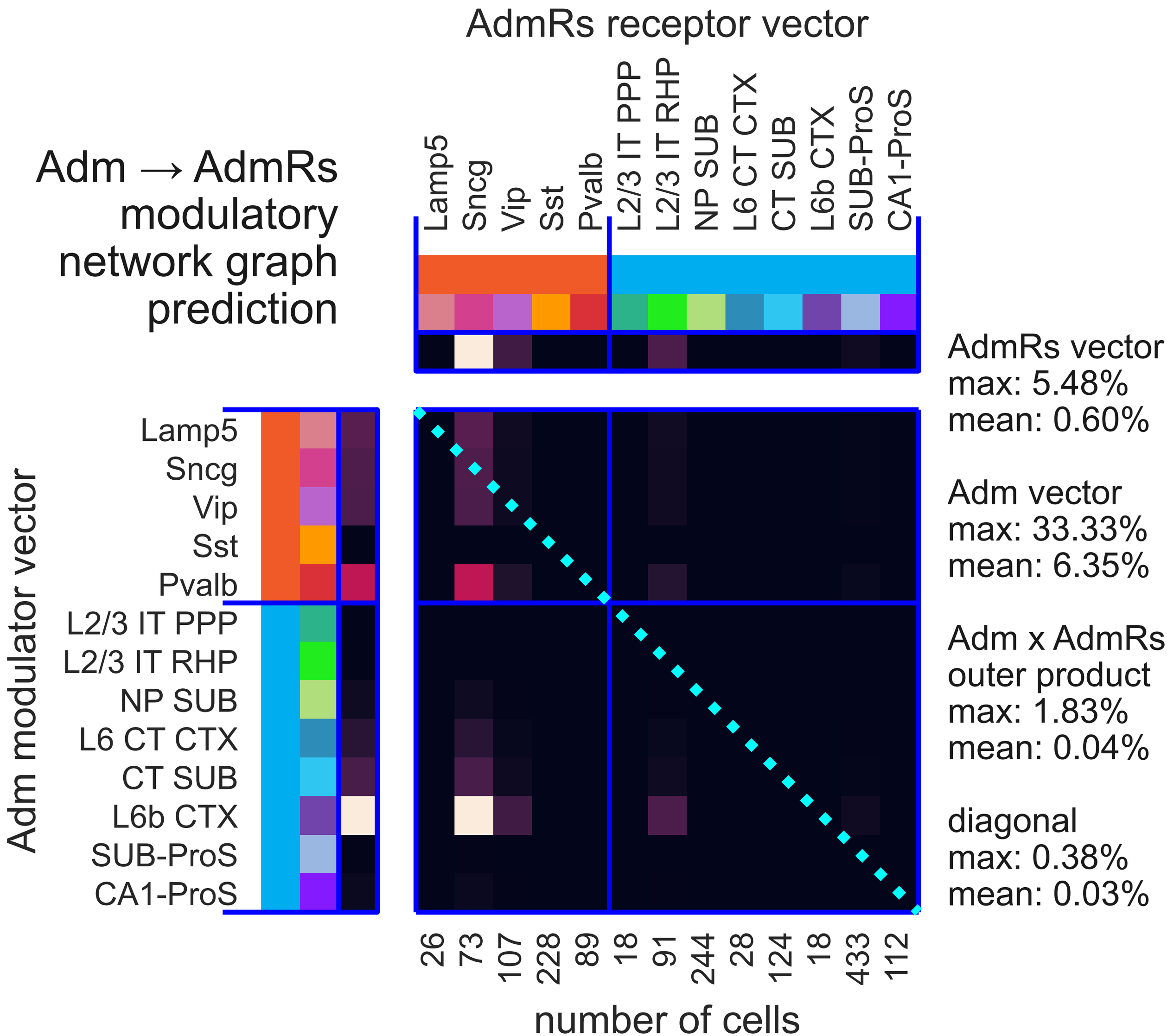
Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)



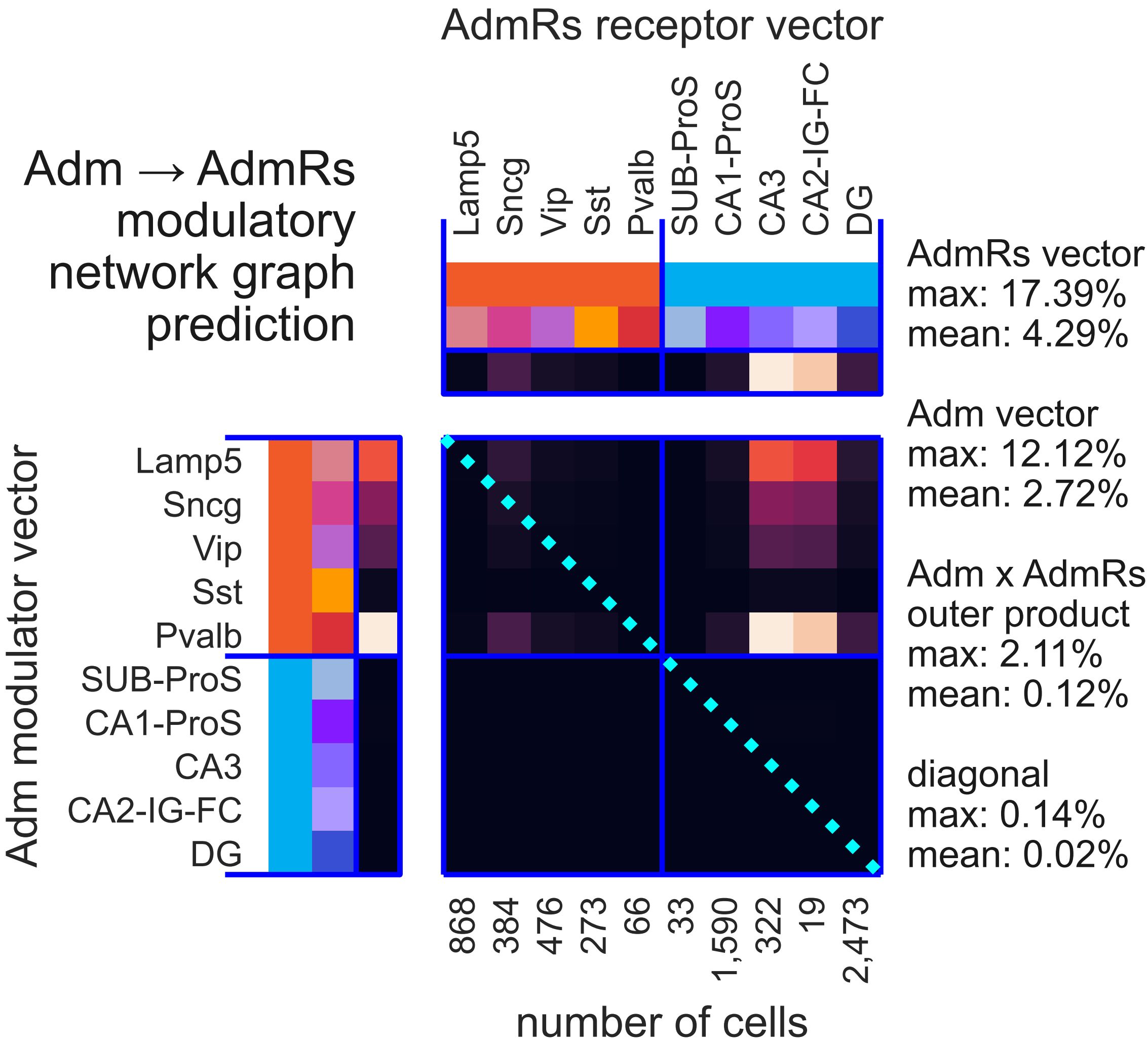
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



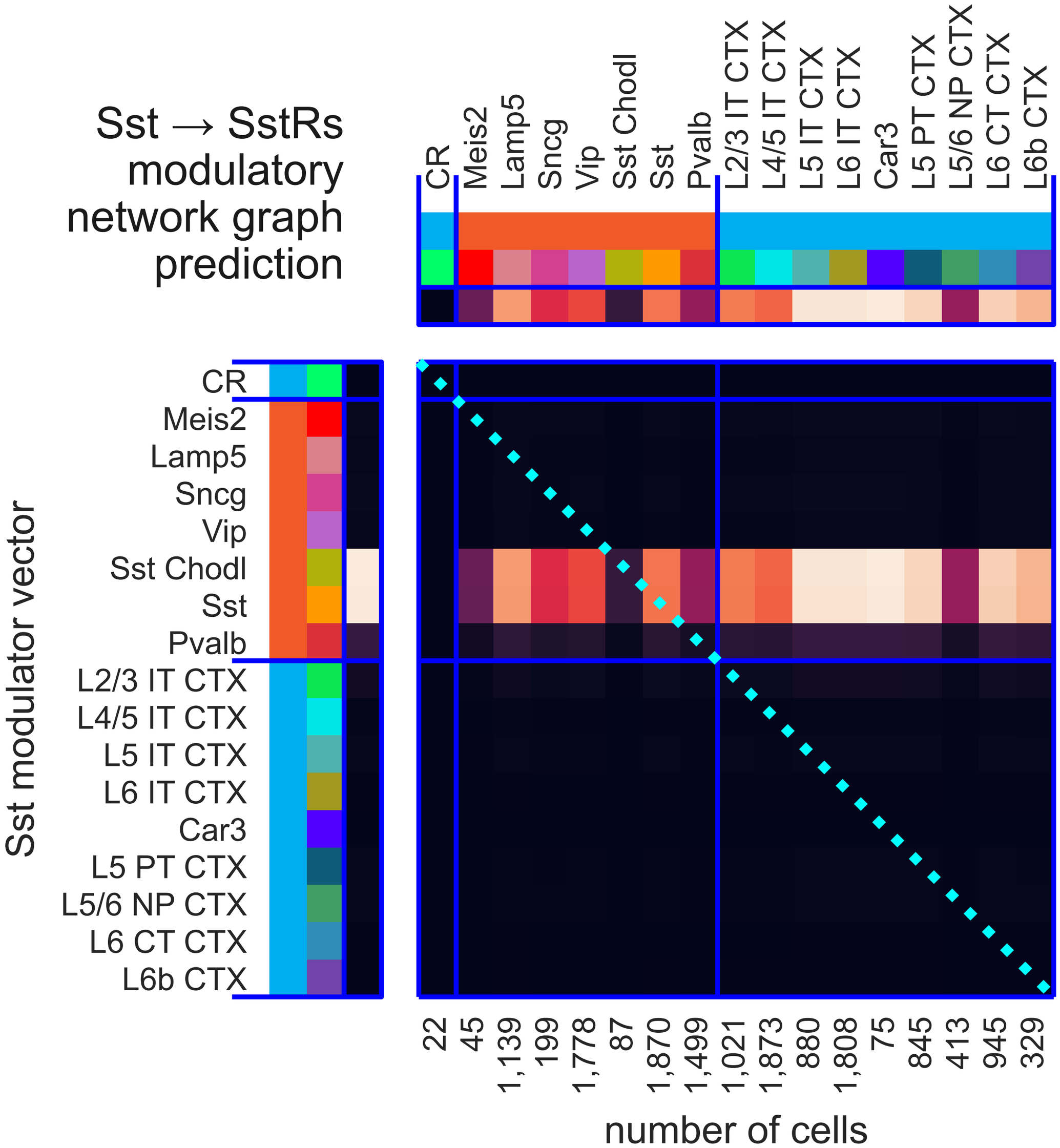
Y21ss thr=10 sn:12402
Hippocampus (HIP)



Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)

SstRs receptor vector

Sst → SstRs modulatory network graph prediction

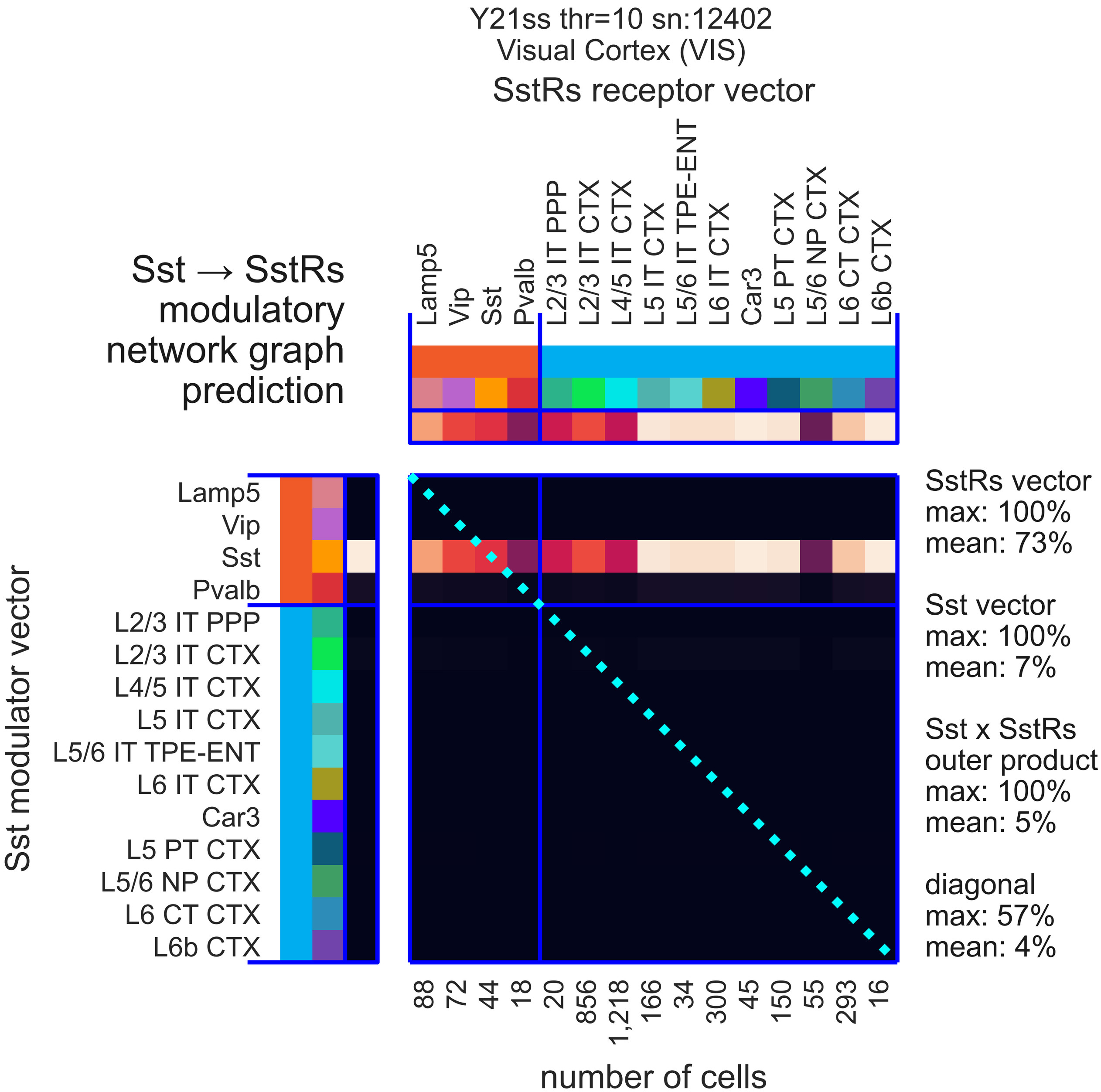


SstRs vector
max: 100%
mean: 64%

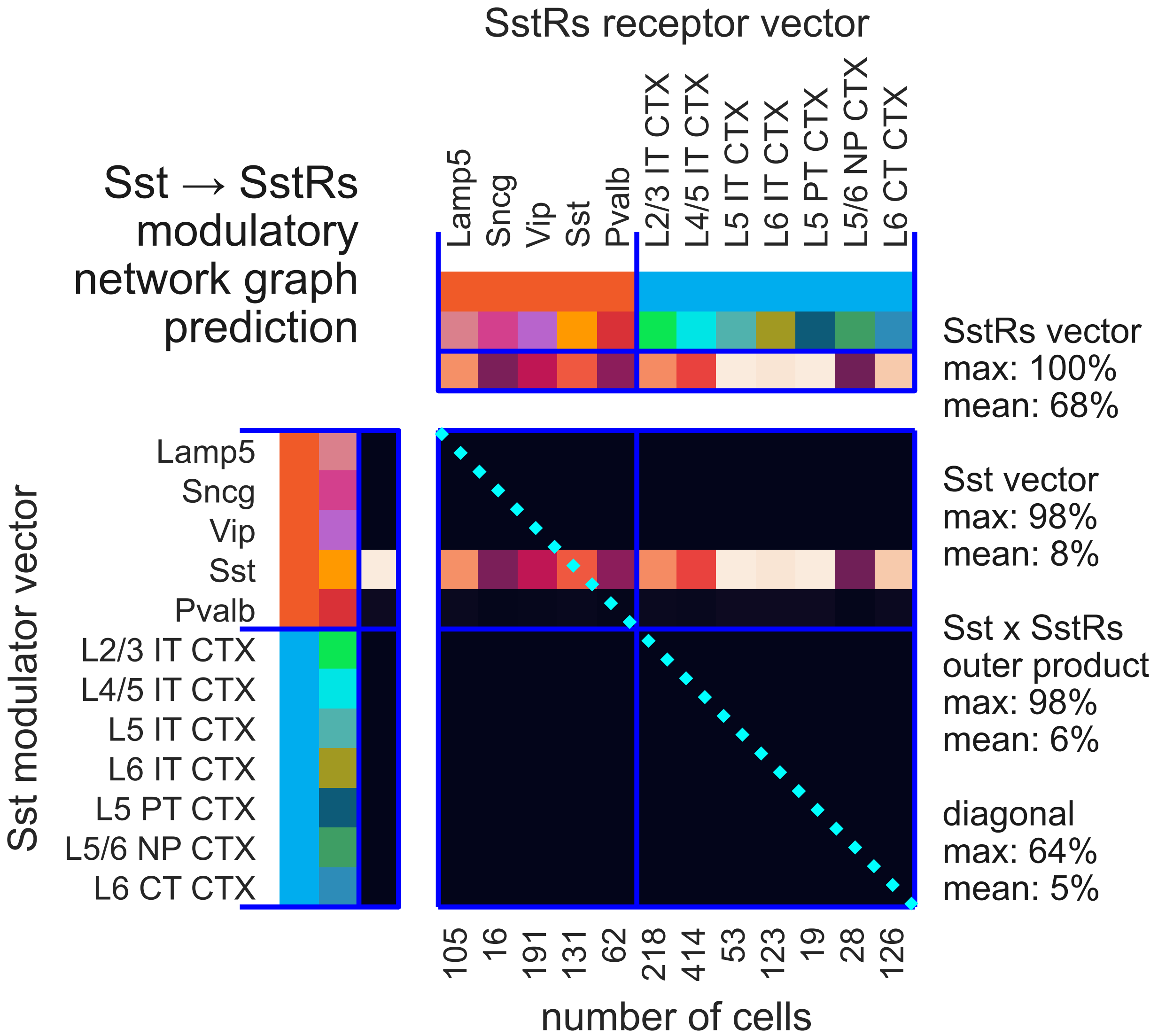
Sst vector
max: 100%
mean: 14%

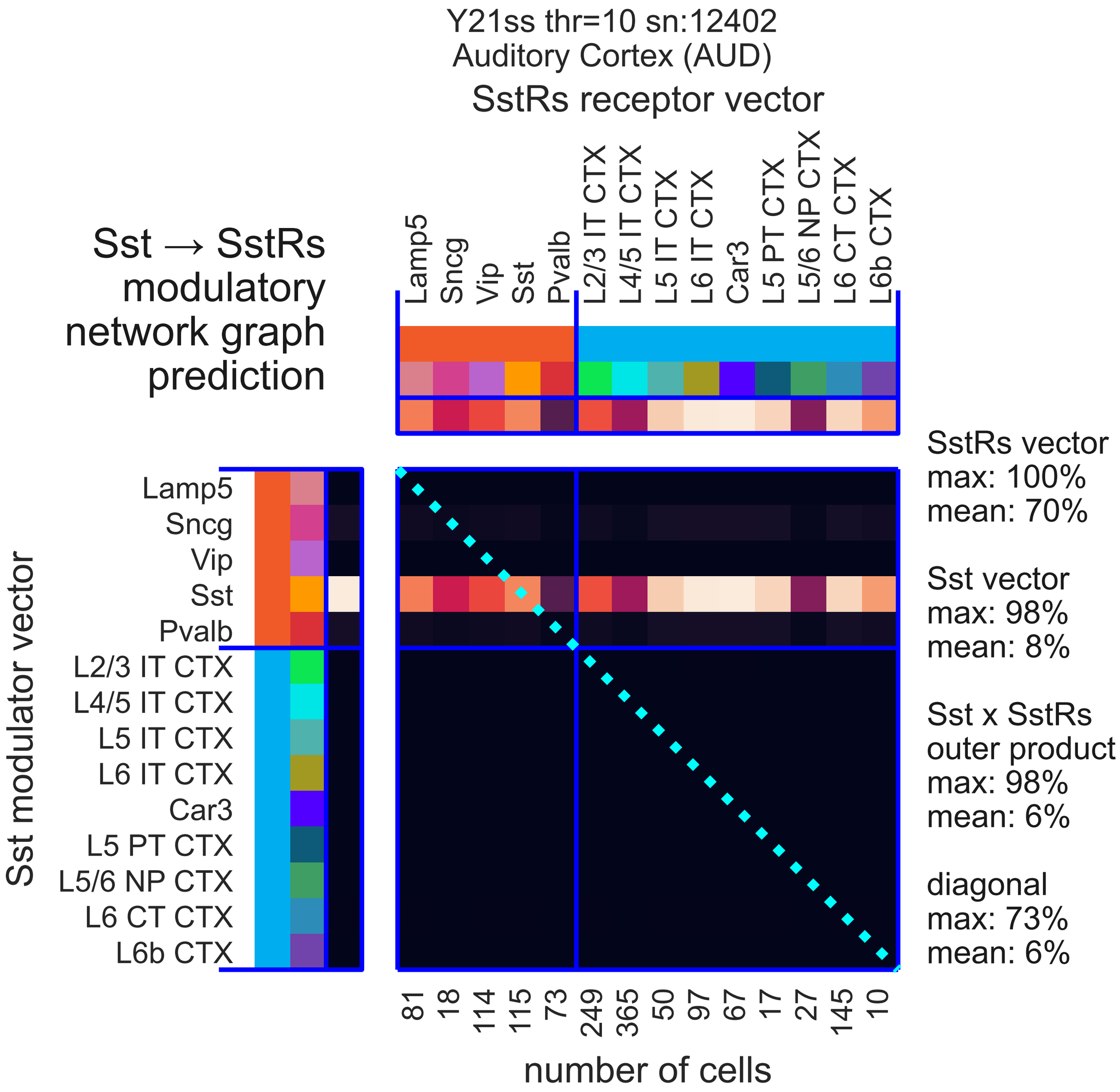
Sst x SstRs
outer product
max: 100%
mean: 9%

diagonal
max: 70%
mean: 6%

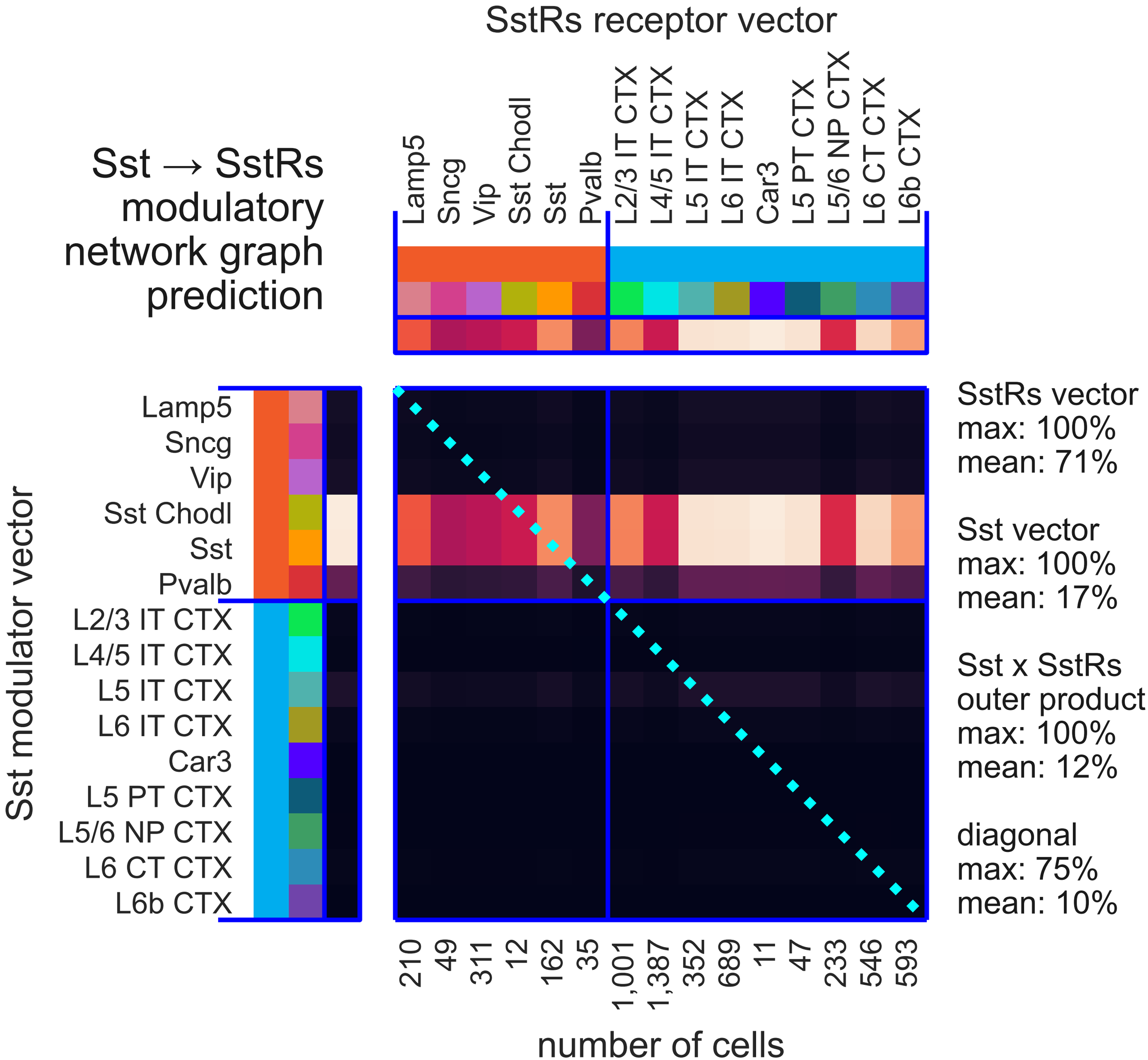

Y21ss thr=10 sn:12402
Visual Cortex (VIS)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Sst modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
SstRs vector
max: 100%
mean: 73%
Sst vector
max: 100%
mean: 7%
Sst x SstRs
outer product
max: 100%
mean: 5%
diagonal
max: 57%
mean: 4%

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)

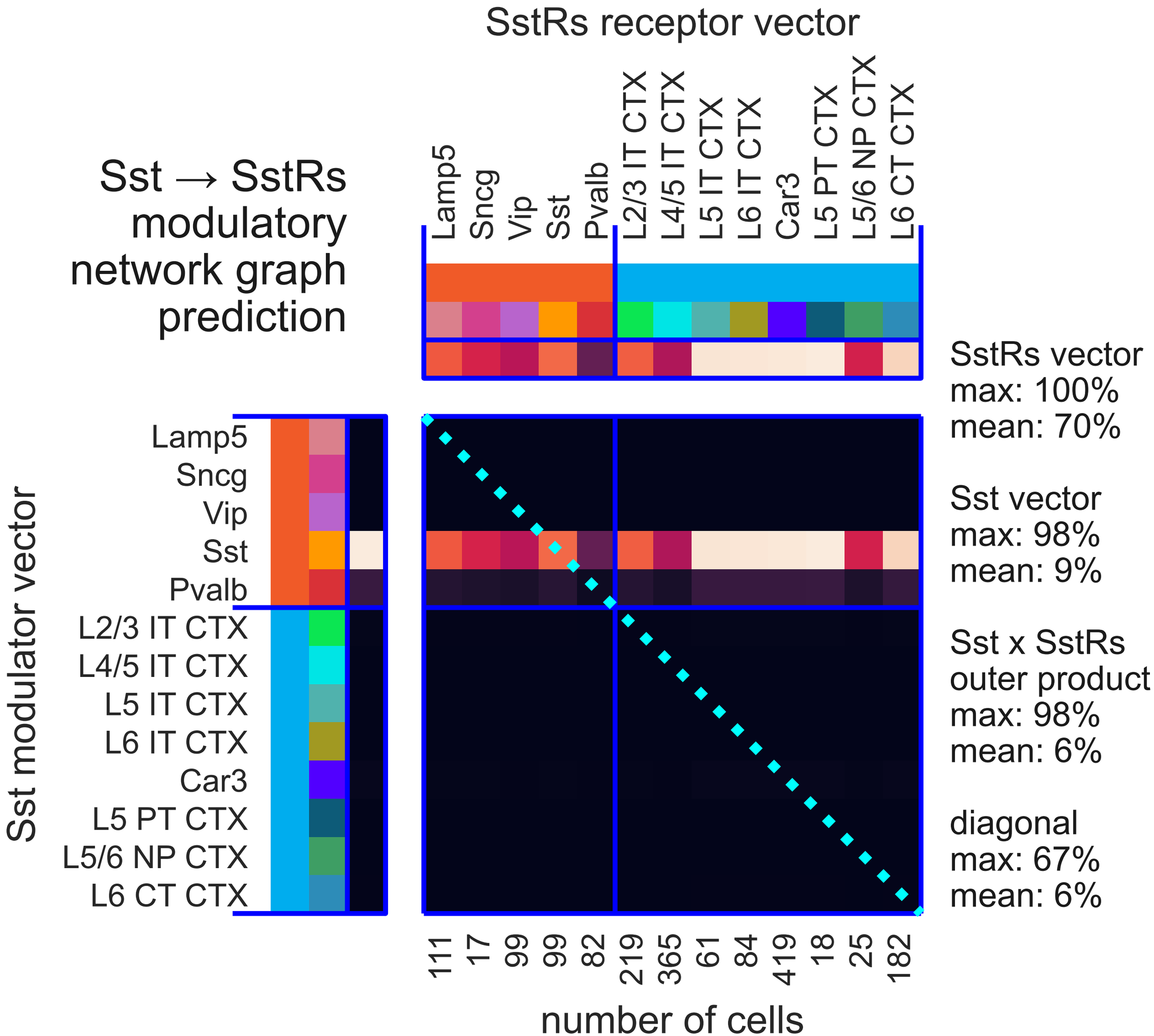


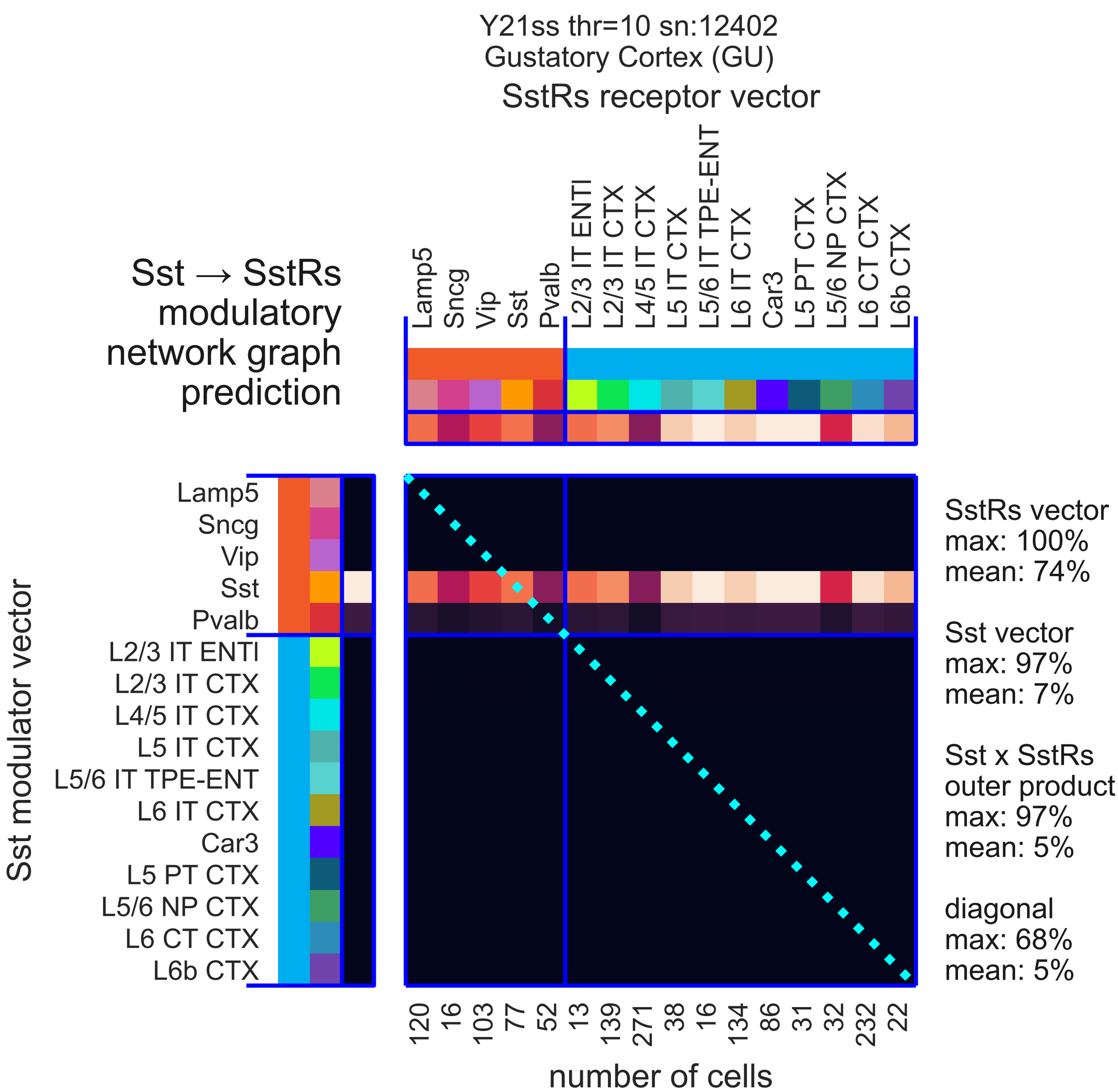

Y21ss thr=10 sn:12402
Auditory Cortex (AUD)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Sst modulator vector
SstRs vector
max: 100%
mean: 70%
Sst vector
max: 98%
mean: 8%
Sst x SstRs
outer product
max: 98%
mean: 6%
diagonal
max: 73%
mean: 6%
81
18
114
115
73
249
365
50
97
67
17
27
145
10
number of cells

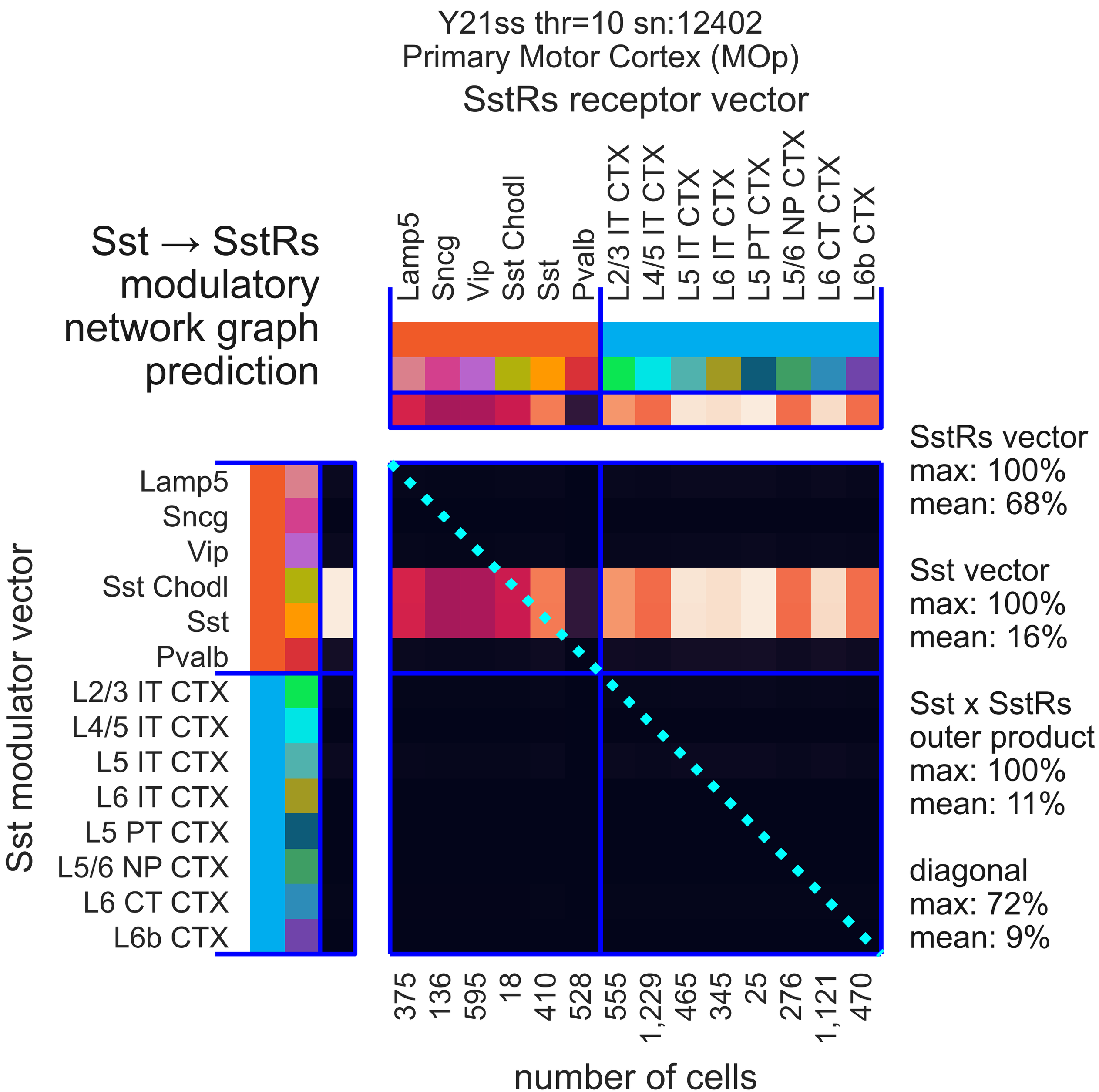
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



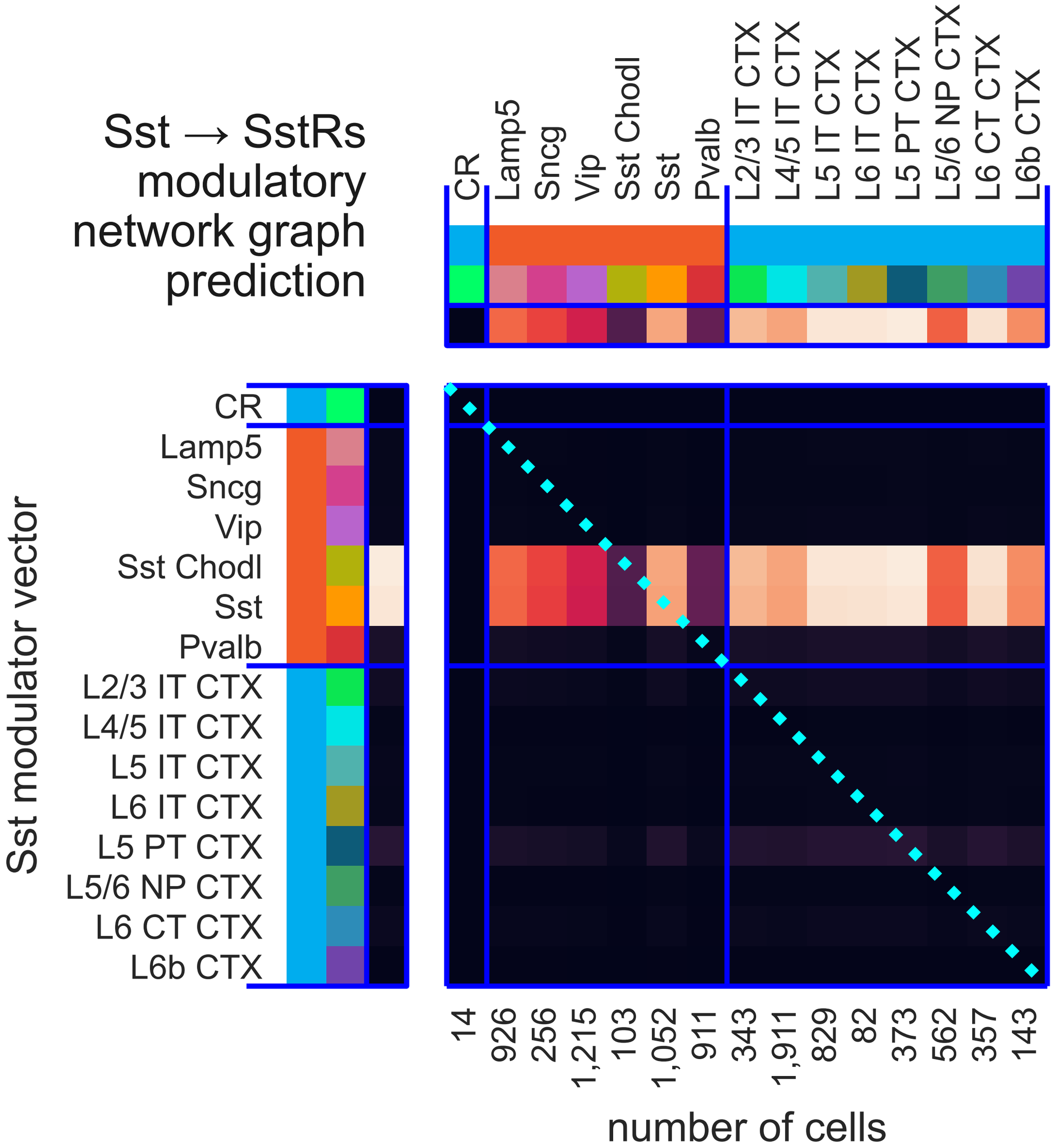

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Sst modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
SstRs vector
max: 100%
mean: 74%
Sst vector
max: 97%
mean: 7%
Sst x SstRs
outer product
max: 97%
mean: 5%
diagonal
max: 68%
mean: 5%


Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Sst modulator vector
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells
SstRs vector
max: 100%
mean: 68%
Sst vector
max: 100%
mean: 16%
Sst x SstRs
outer product
max: 100%
mean: 11%
diagonal
max: 72%
mean: 9%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

SstRs receptor vector

Sst → SstRs
modulatory
network graph
prediction



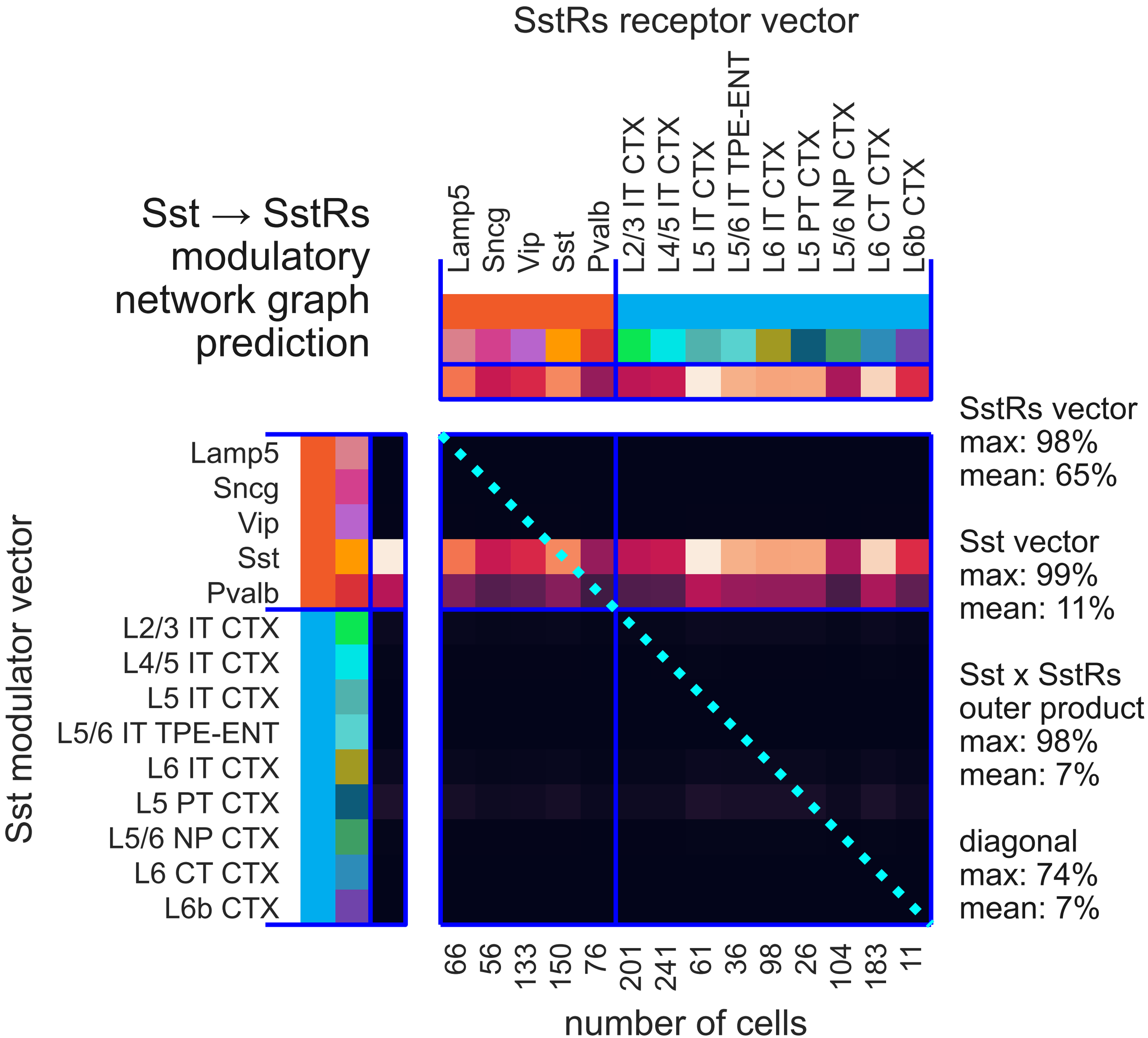
SstRs vector
max: 100%
mean: 68%

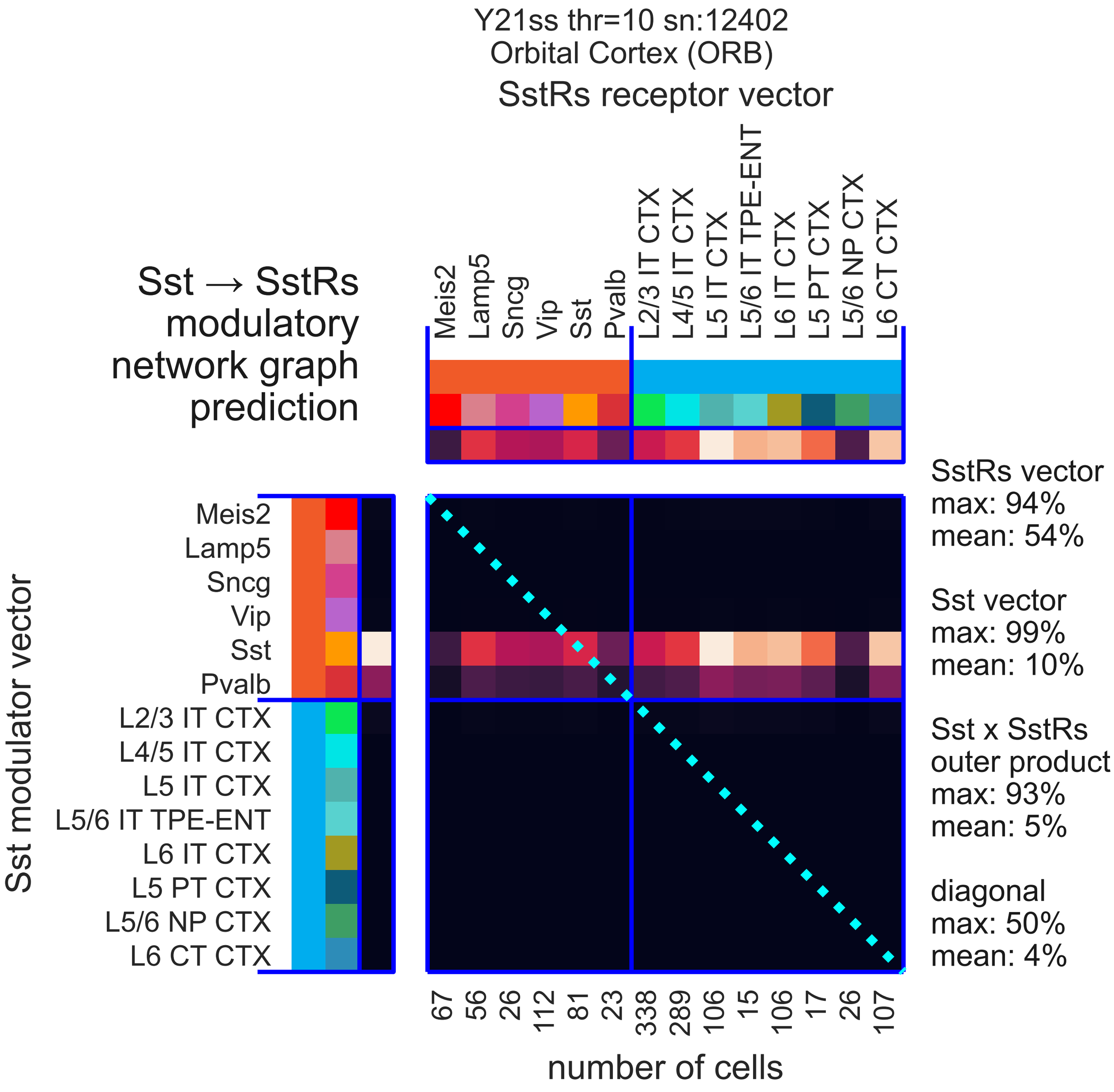
Sst vector
max: 100%
mean: 15%

Sst x SstRs
outer product
max: 100%
mean: 11%

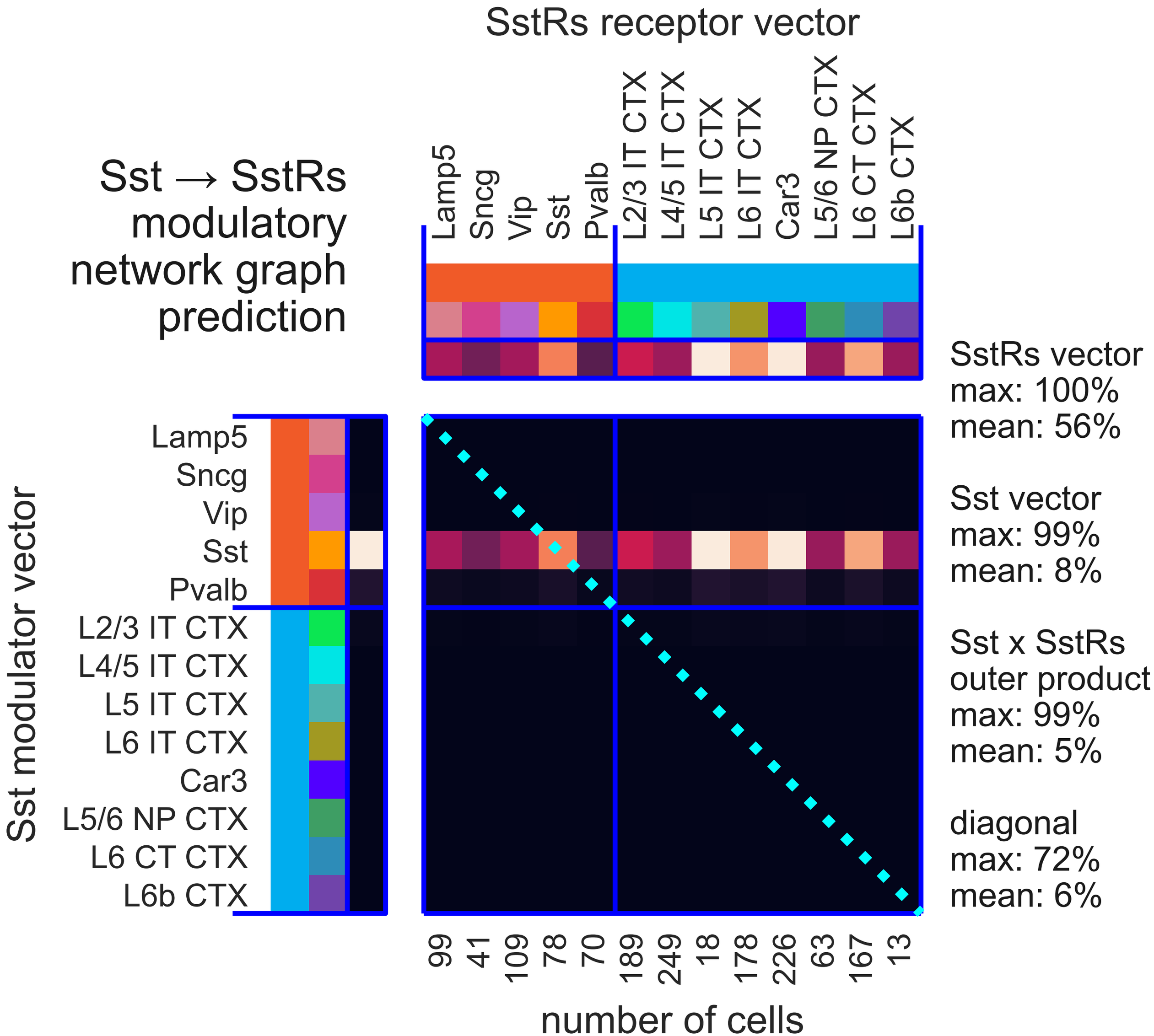
diagonal
max: 81%
mean: 9%

Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

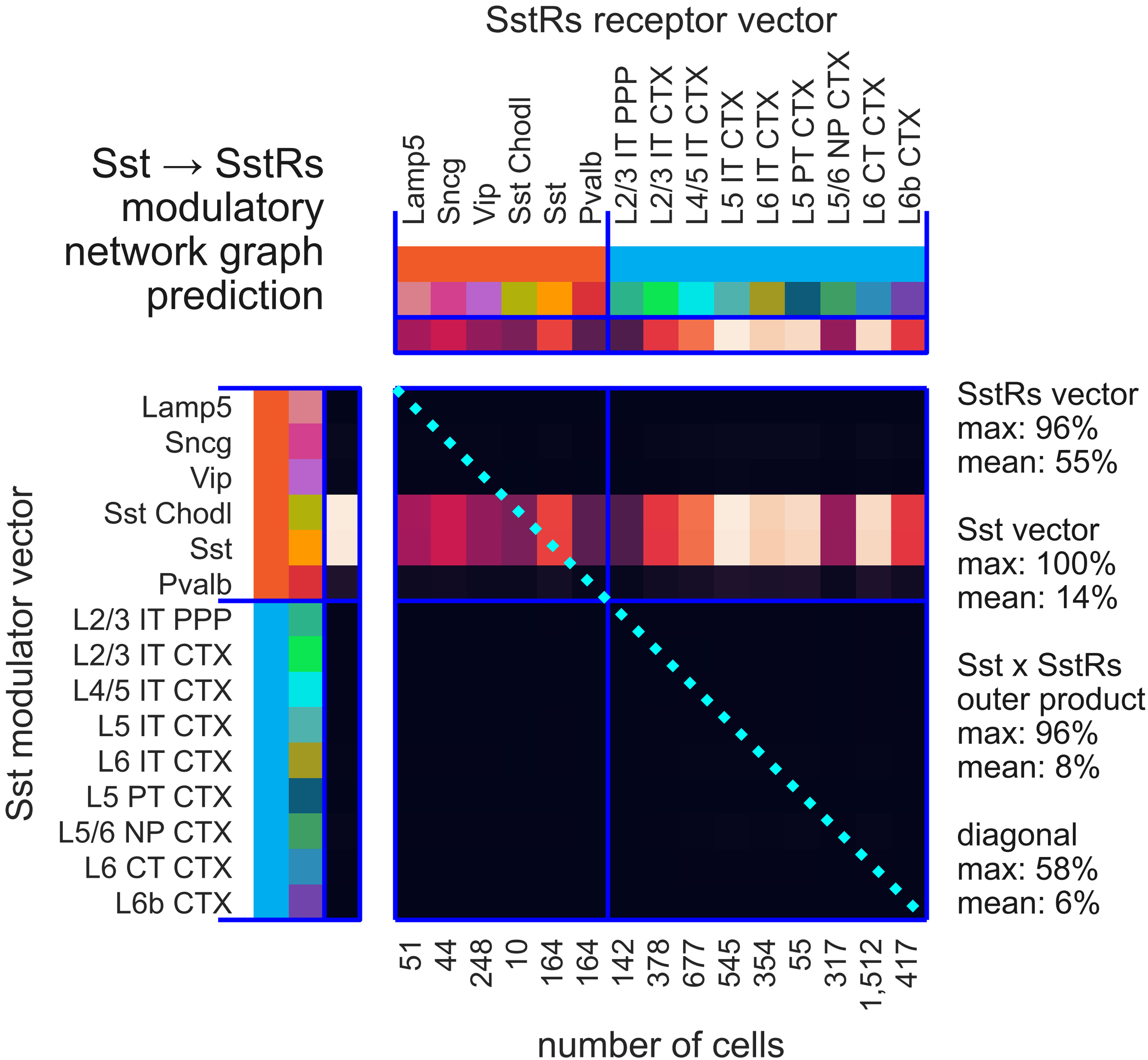


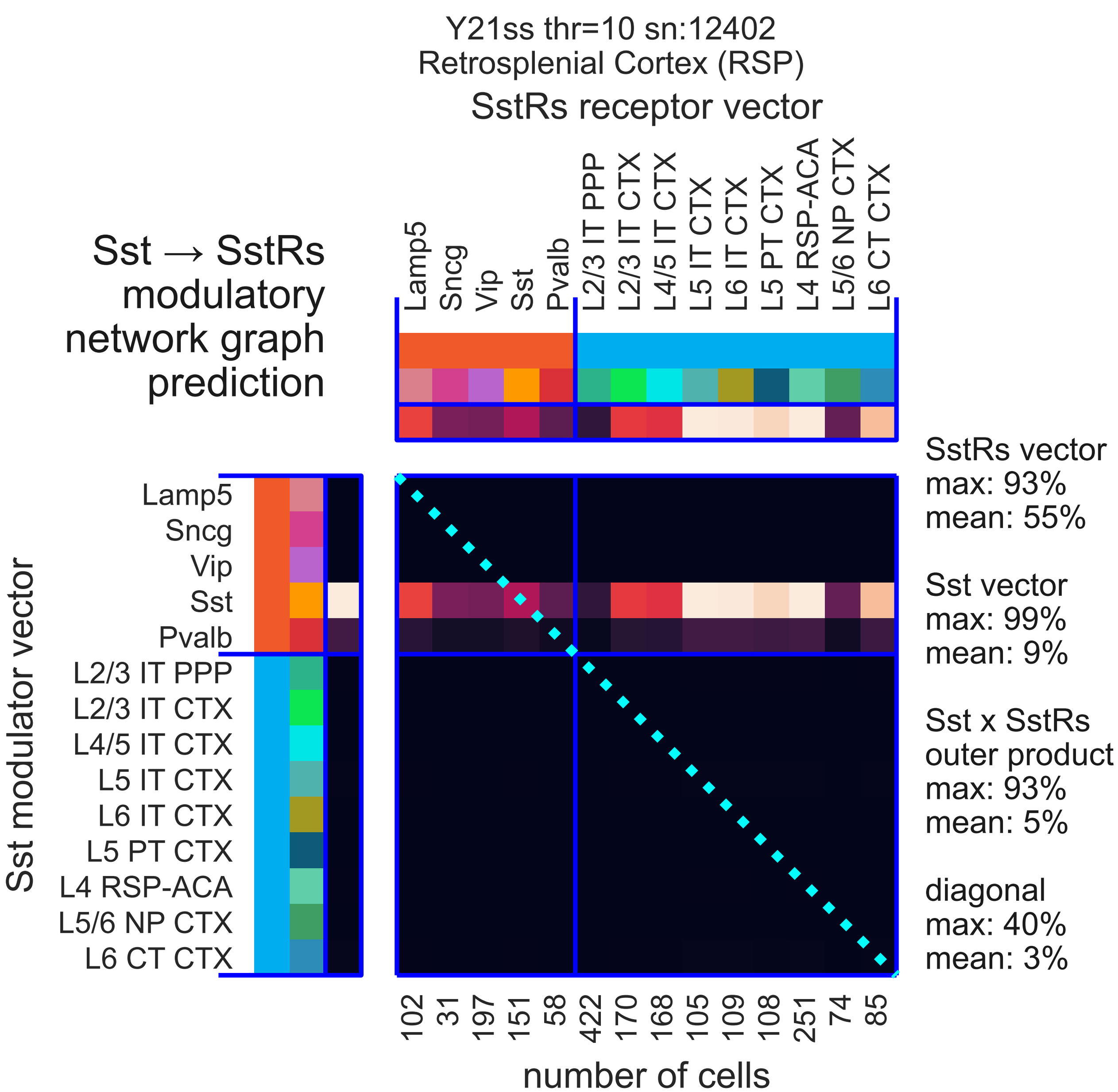

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Sst modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
SstRs vector
max: 94%
mean: 54%
Sst vector
max: 99%
mean: 10%
Sst x SstRs
outer product
max: 93%
mean: 5%
diagonal
max: 50%
mean: 4%

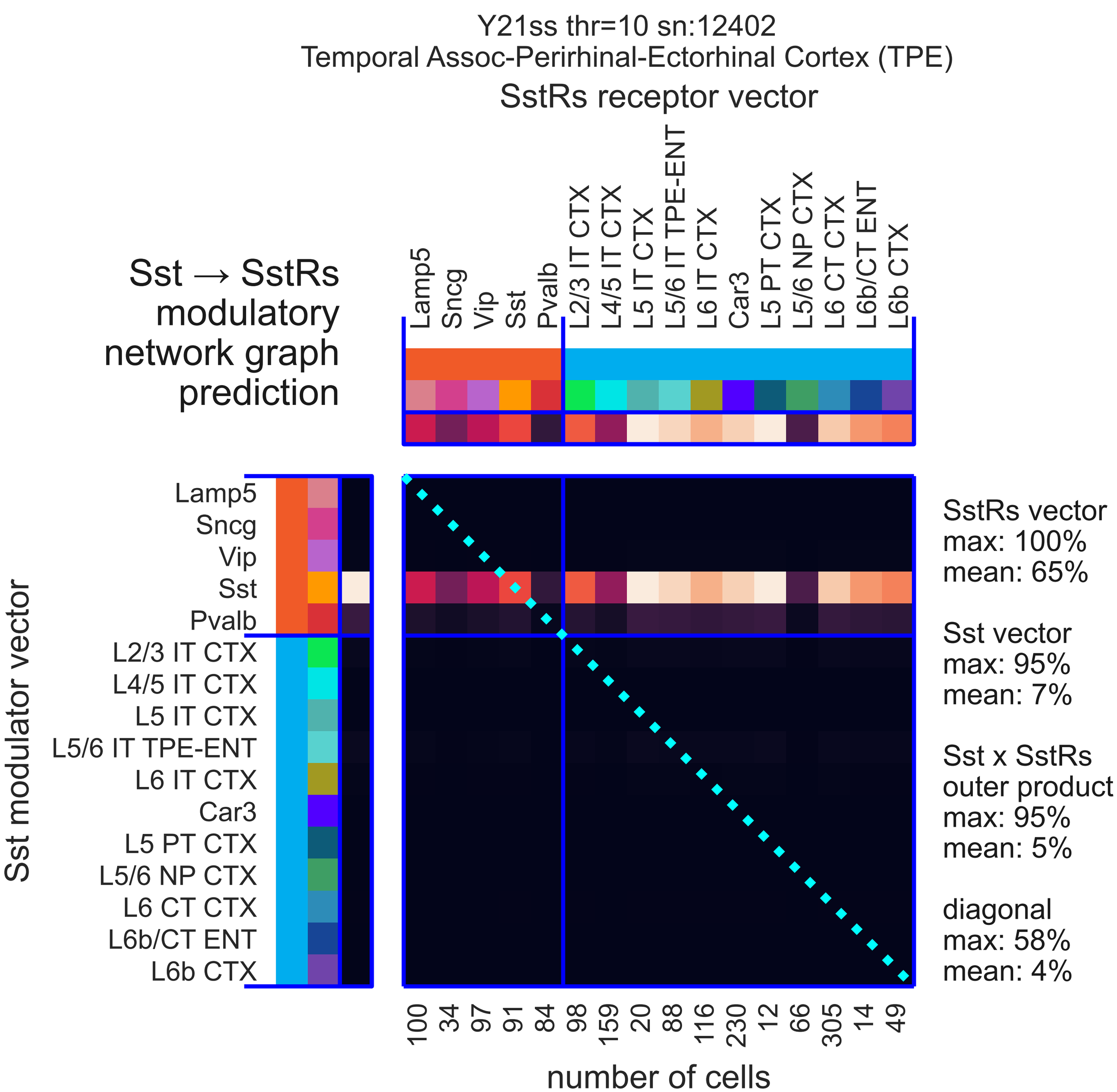
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

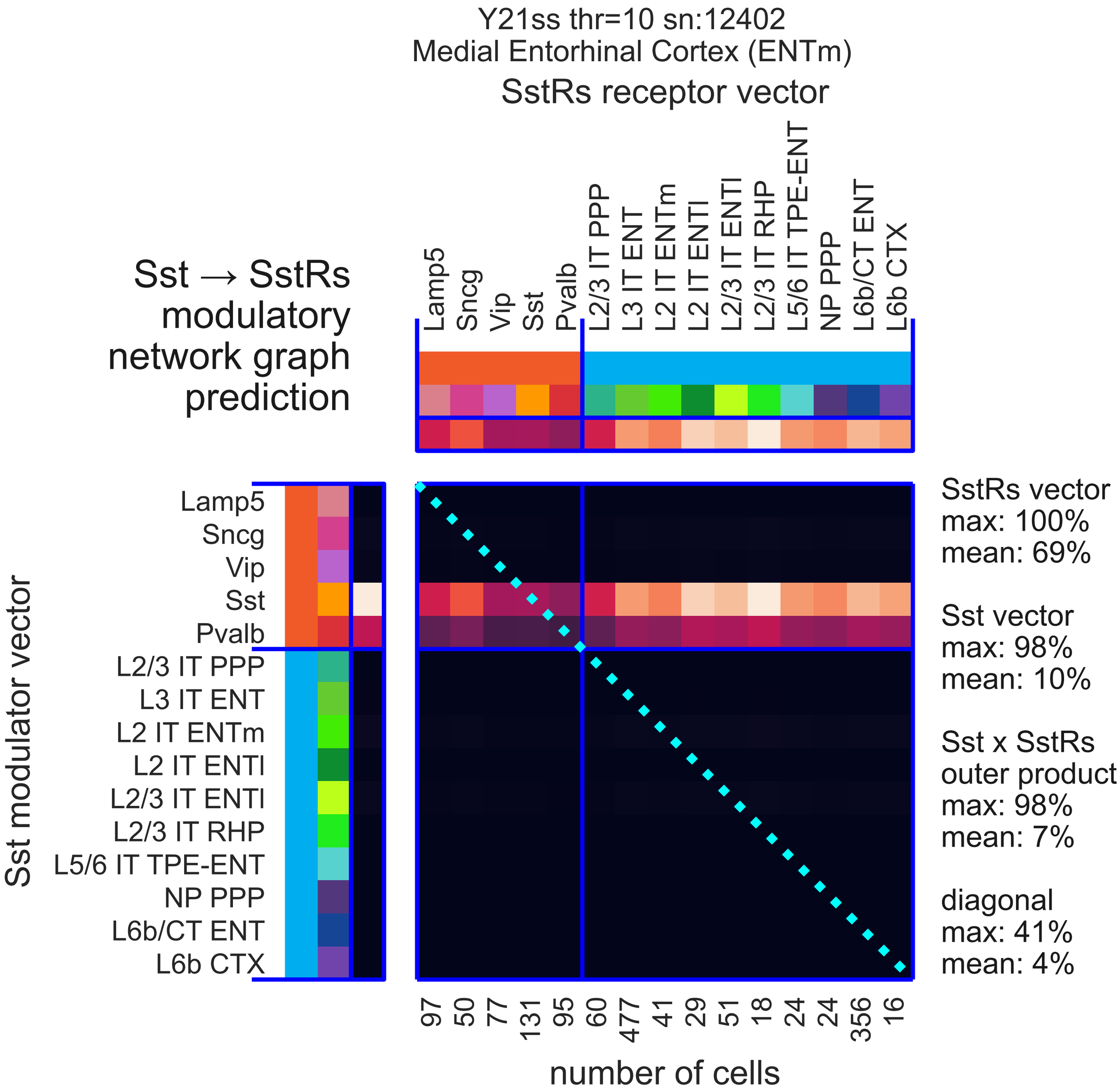


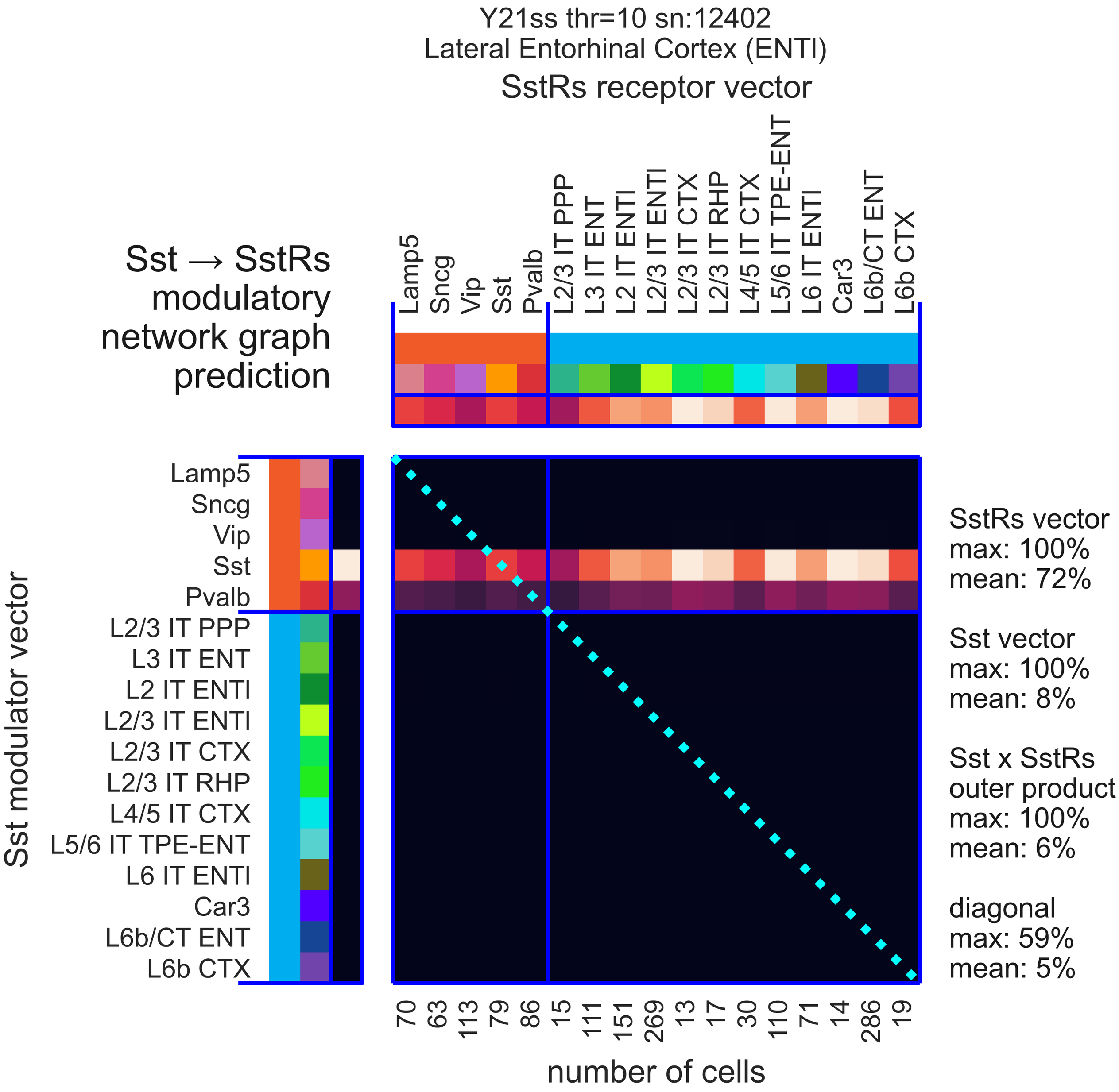
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)



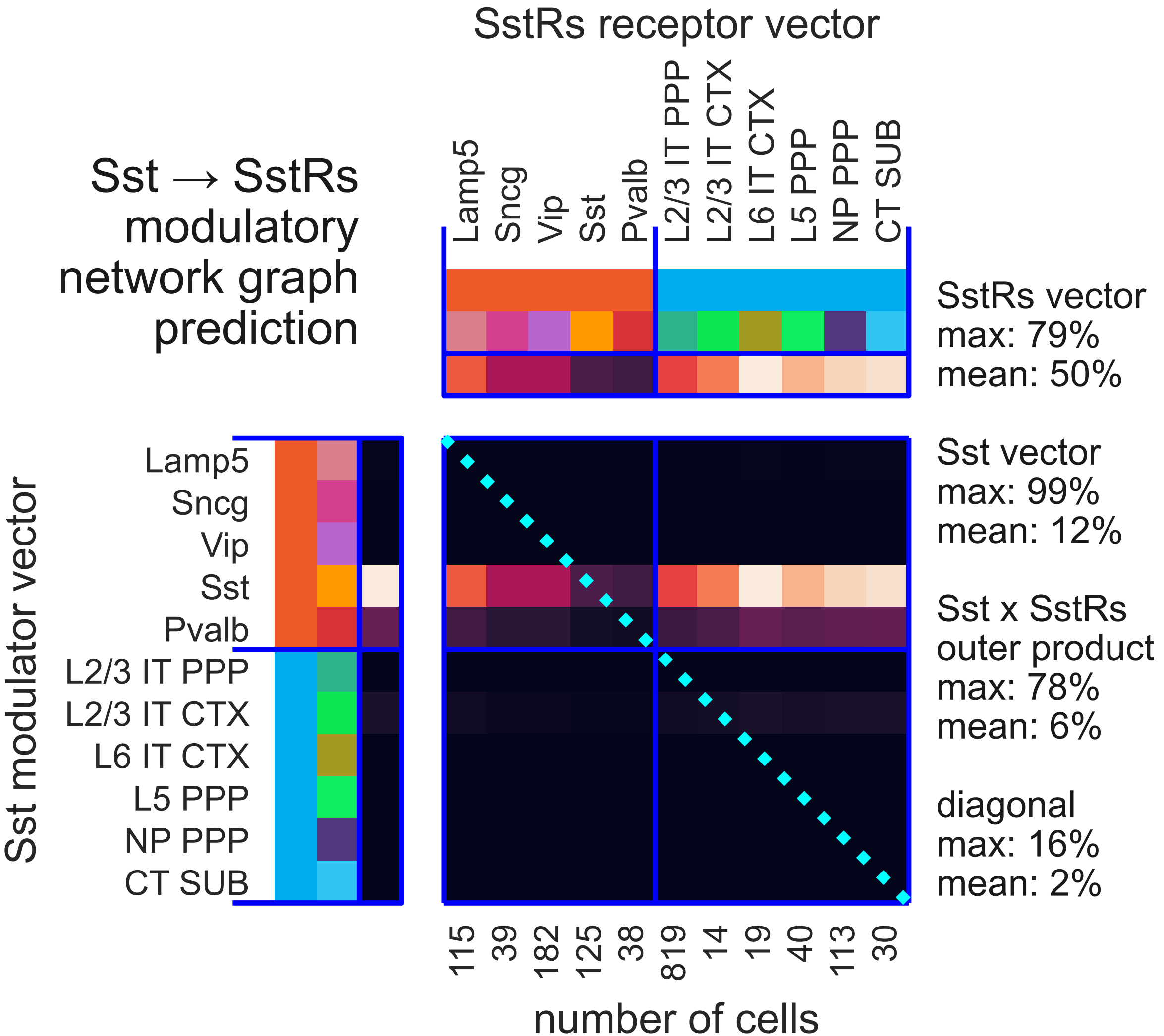

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Sst modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
SstRs vector
max: 93%
mean: 55%
Sst vector
max: 99%
mean: 9%
Sst x SstRs
outer product
max: 93%
mean: 5%
diagonal
max: 40%
mean: 3%

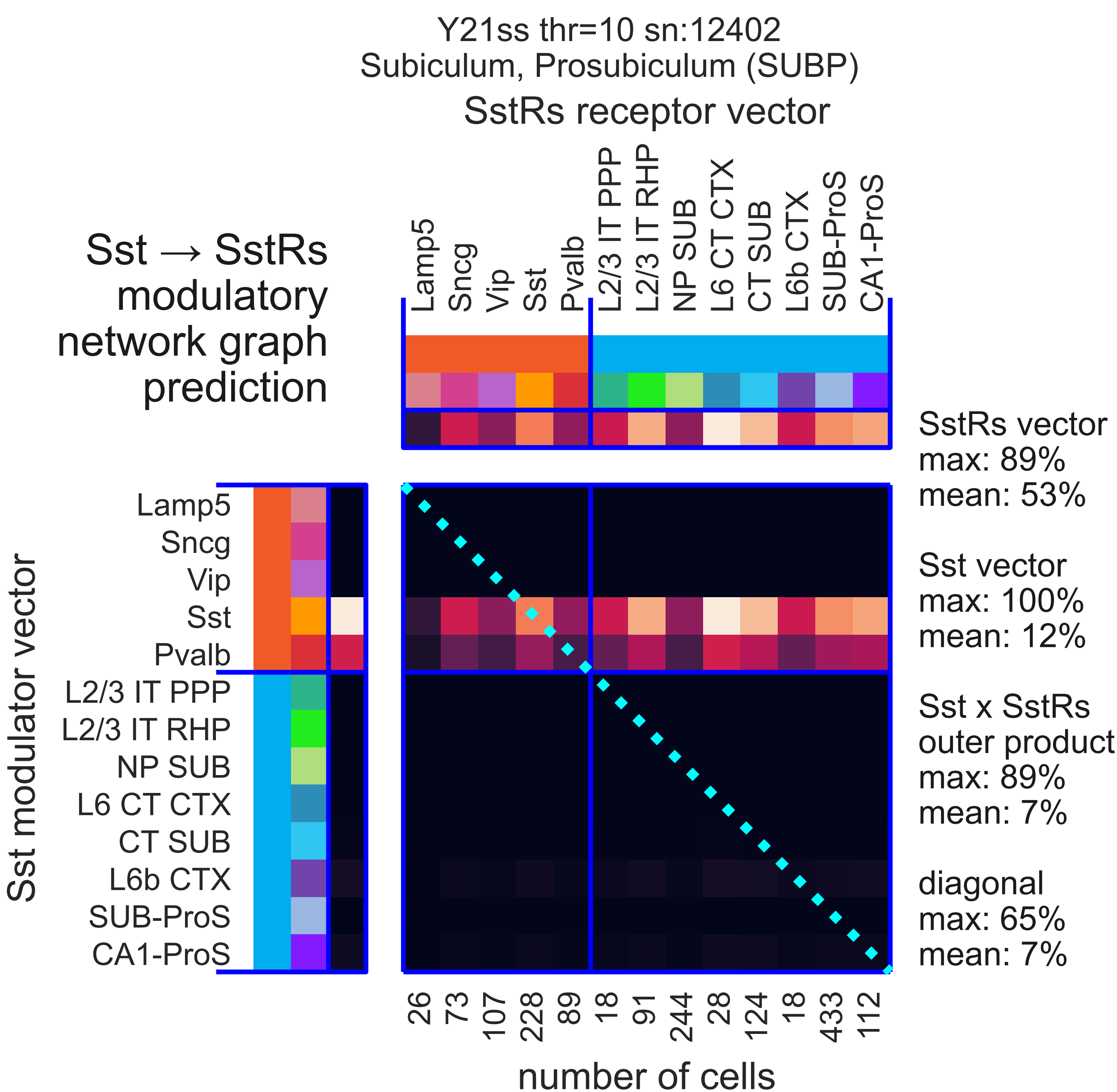

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b/CT ENT
L6b CTX
Sst modulator vector
100
34
97
91
84
98
159
20
88
116
230
12
66
305
14
49
number of cells
SstRs vector
max: 100%
mean: 65%
Sst vector
max: 95%
mean: 7%
Sst x SstRs
outer product
max: 95%
mean: 5%
diagonal
max: 58%
mean: 4%


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Sst modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
SstRs vector
max: 100%
mean: 69%
Sst vector
max: 98%
mean: 10%
Sst x SstRs
outer product
max: 98%
mean: 7%
diagonal
max: 41%
mean: 4%


Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Sst modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
SstRs vector
max: 100%
mean: 72%
Sst vector
max: 100%
mean: 8%
Sst x SstRs
outer product
max: 100%
mean: 6%
diagonal
max: 59%
mean: 5%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

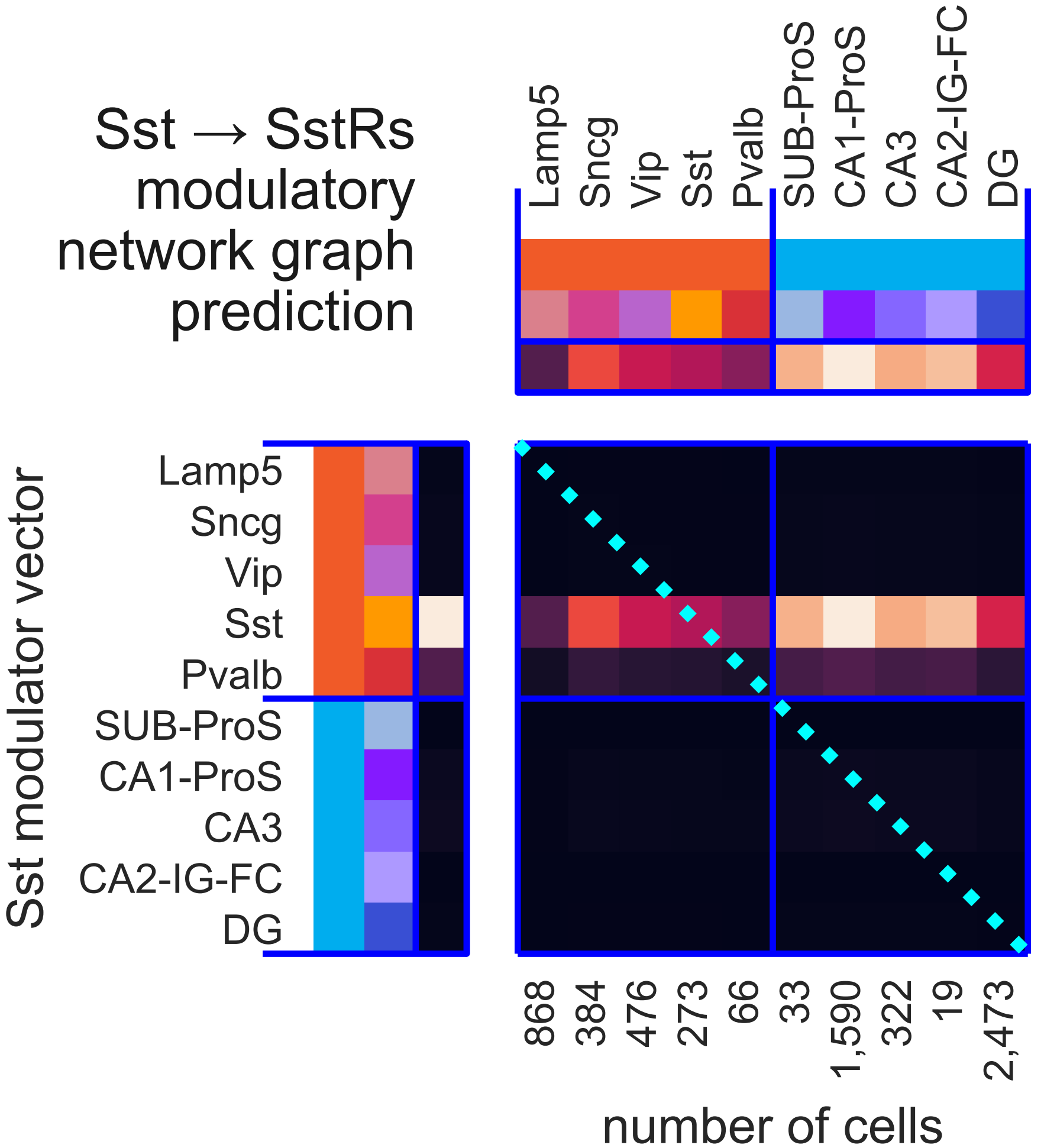



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)
SstRs receptor vector
Sst → SstRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT RHP
NP SUB
L6 CT CTX
CT SUB
L6b CTX
SUB-ProS
CA1-ProS
SstRs vector
max: 89%
mean: 53%
Sst vector
max: 100%
mean: 12%
Sst x SstRs
outer product
max: 89%
mean: 7%
diagonal
max: 65%
mean: 7%
Sst modulator vector
26
73
107
228
89
18
91
244
28
124
18
433
112
number of cells

Y21ss thr=10 sn:12402
Hippocampus (HIP)

SstRs receptor vector

Sst → SstRs modulatory network graph prediction

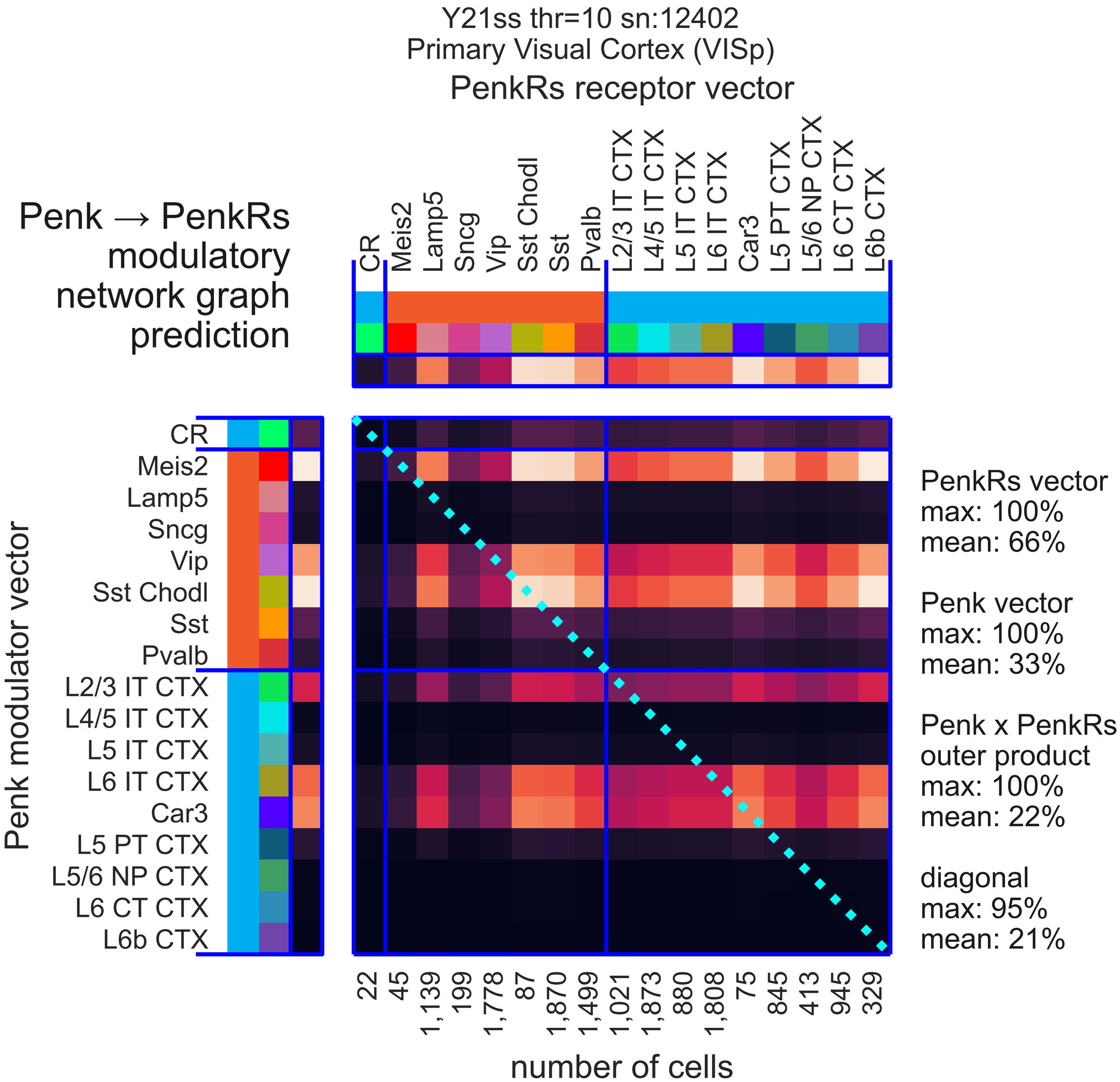


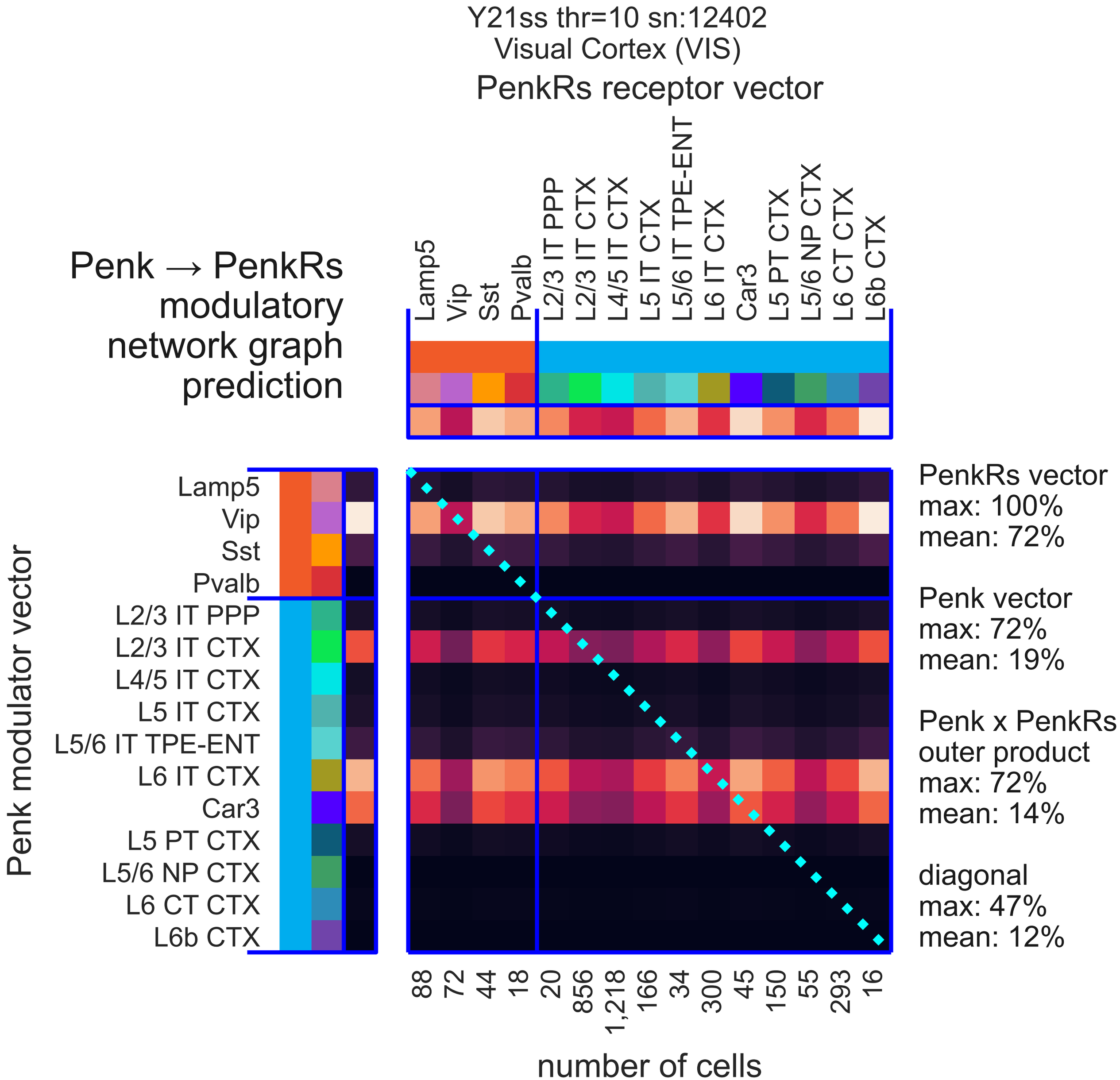
SstRs vector
max: 89%
mean: 55%

Sst vector
max: 99%
mean: 13%

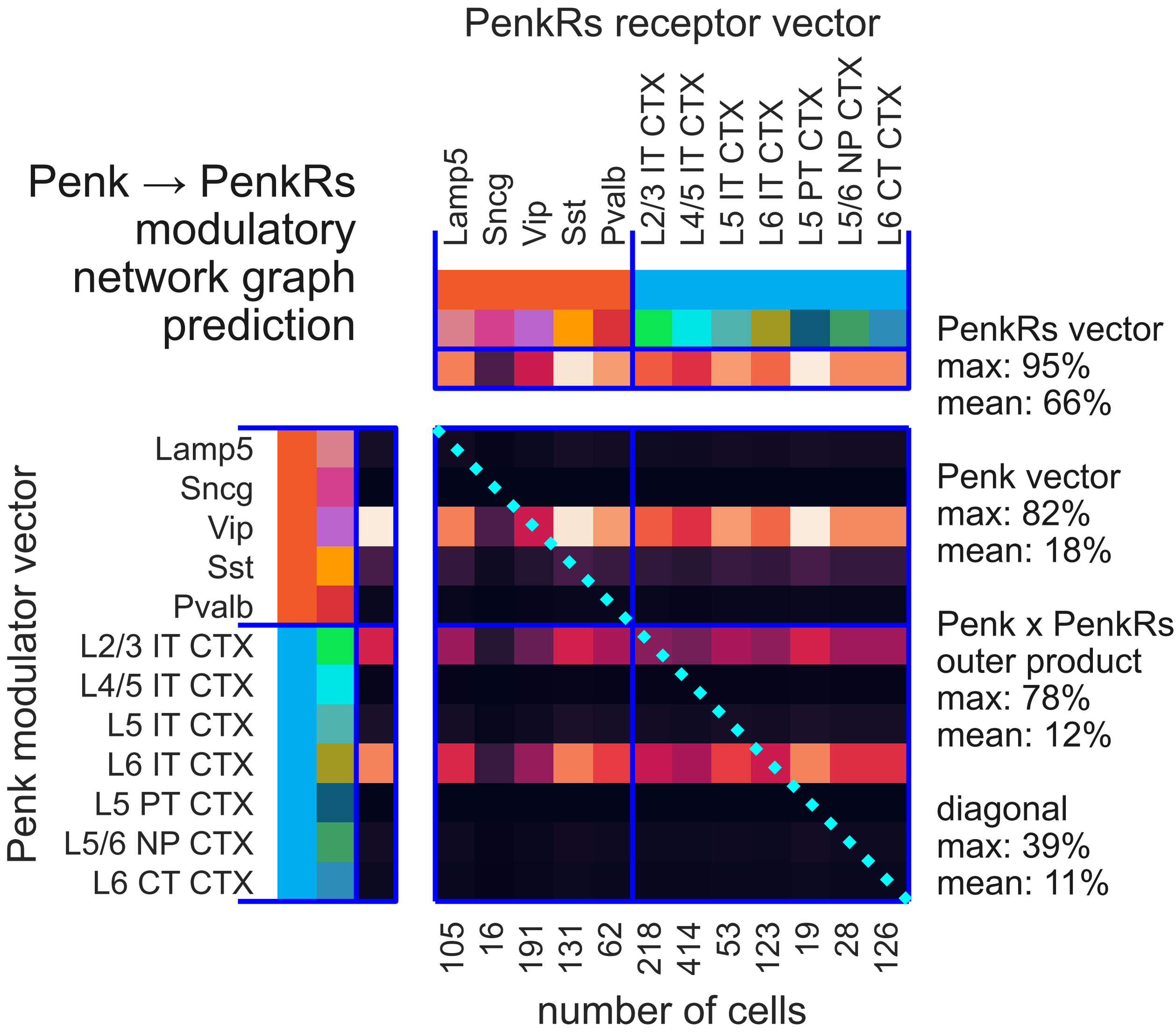
Sst x SstRs
outer product
max: 88%
mean: 7%

diagonal
max: 39%
mean: 5%


Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
PenkRs receptor vector
Penk → PenkRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Penk modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
PenkRs vector
max: 100%
mean: 66%
Penk vector
max: 100%
mean: 33%
Penk x PenkRs
outer product
max: 100%
mean: 22%
diagonal
max: 95%
mean: 21%


Y21ss thr=10 sn:12402
Visual Cortex (VIS)
PenkRs receptor vector
Penk → PenkRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Penk modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
PenkRs vector
max: 100%
mean: 72%
Penk vector
max: 72%
mean: 19%
Penk x PenkRs
outer product
max: 72%
mean: 14%
diagonal
max: 47%
mean: 12%

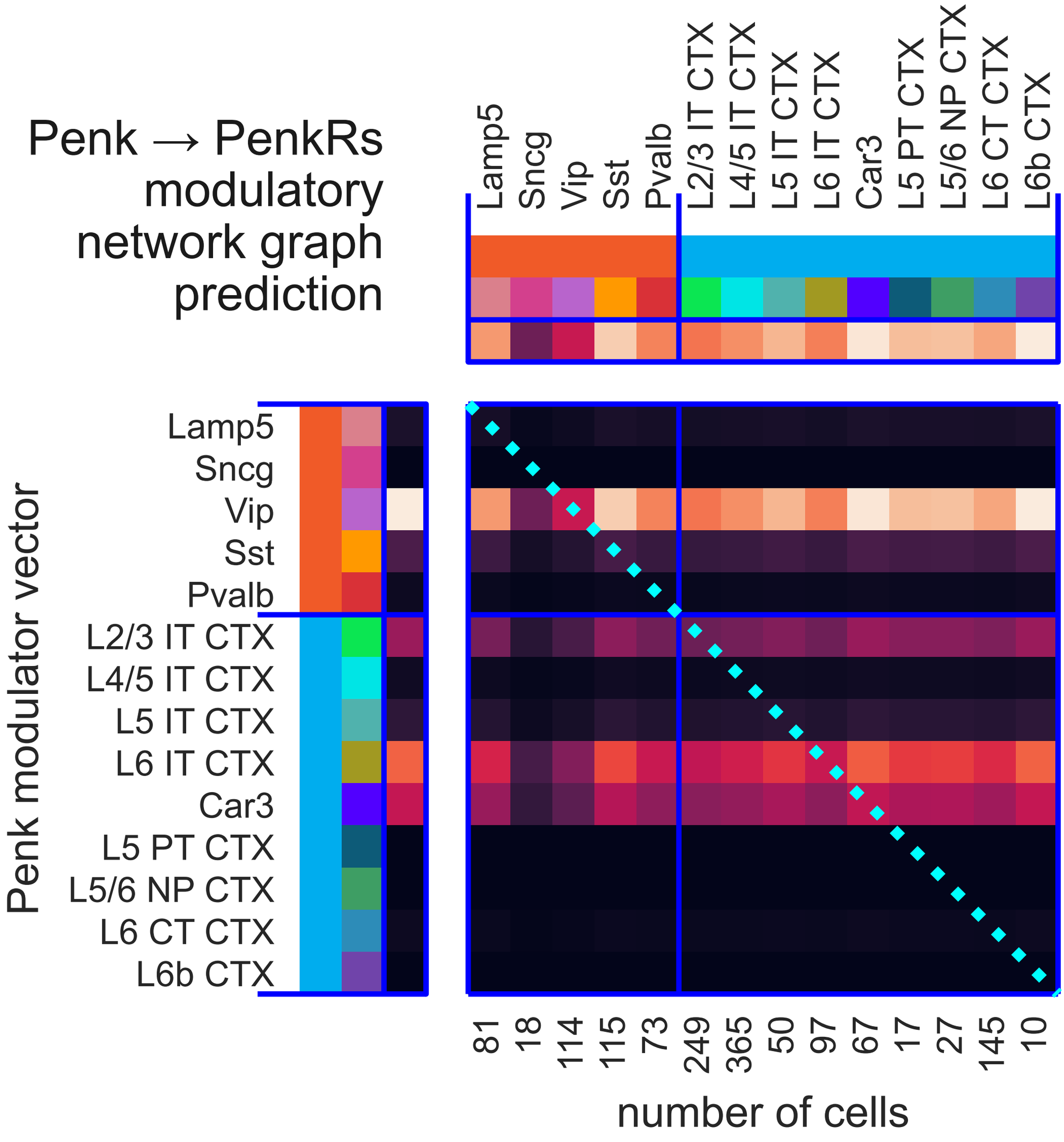
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

PenkRs receptor vector

Penk → PenkRs
modulatory
network graph
prediction

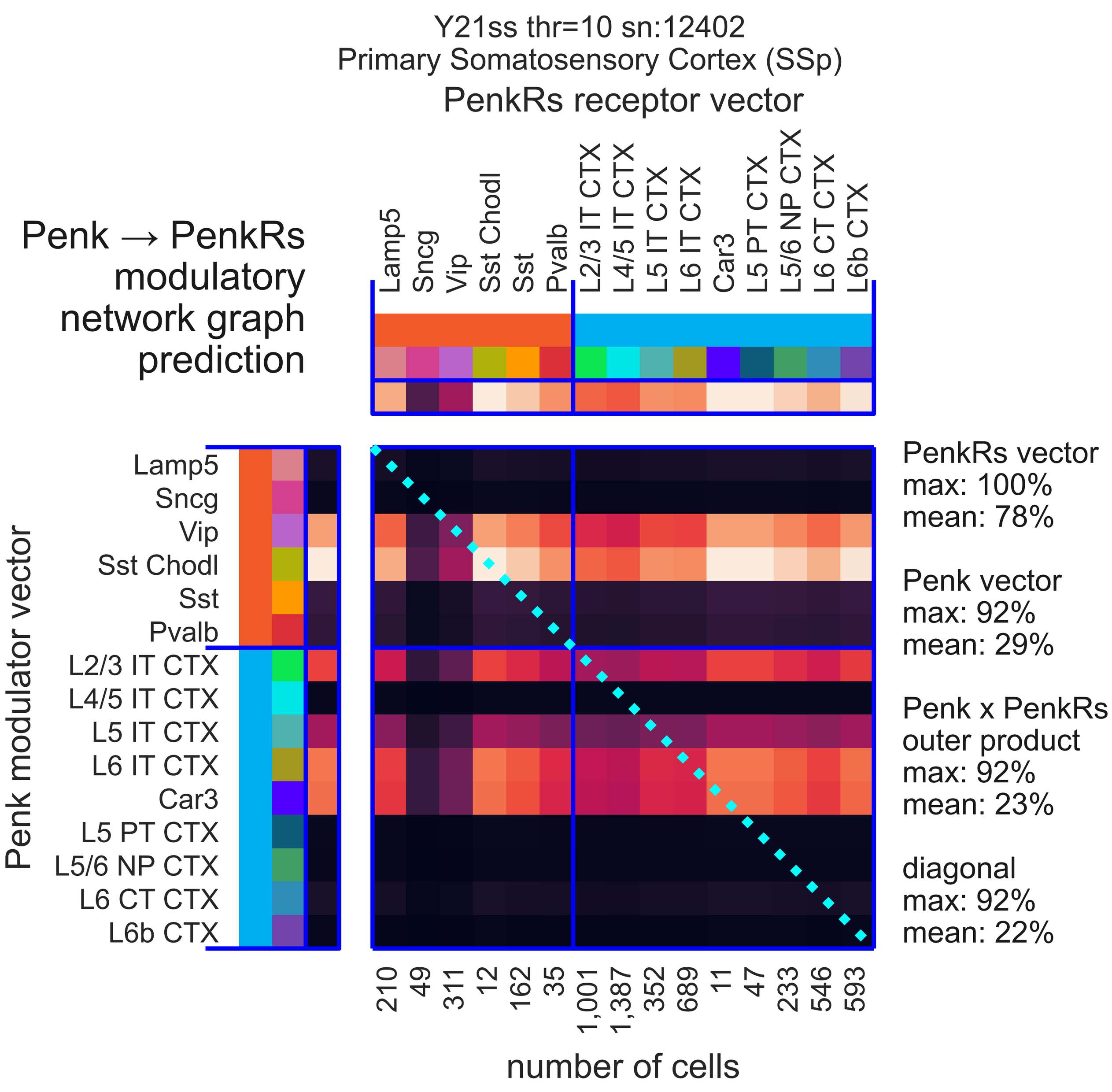


PenkRs vector
max: 100%
mean: 78%

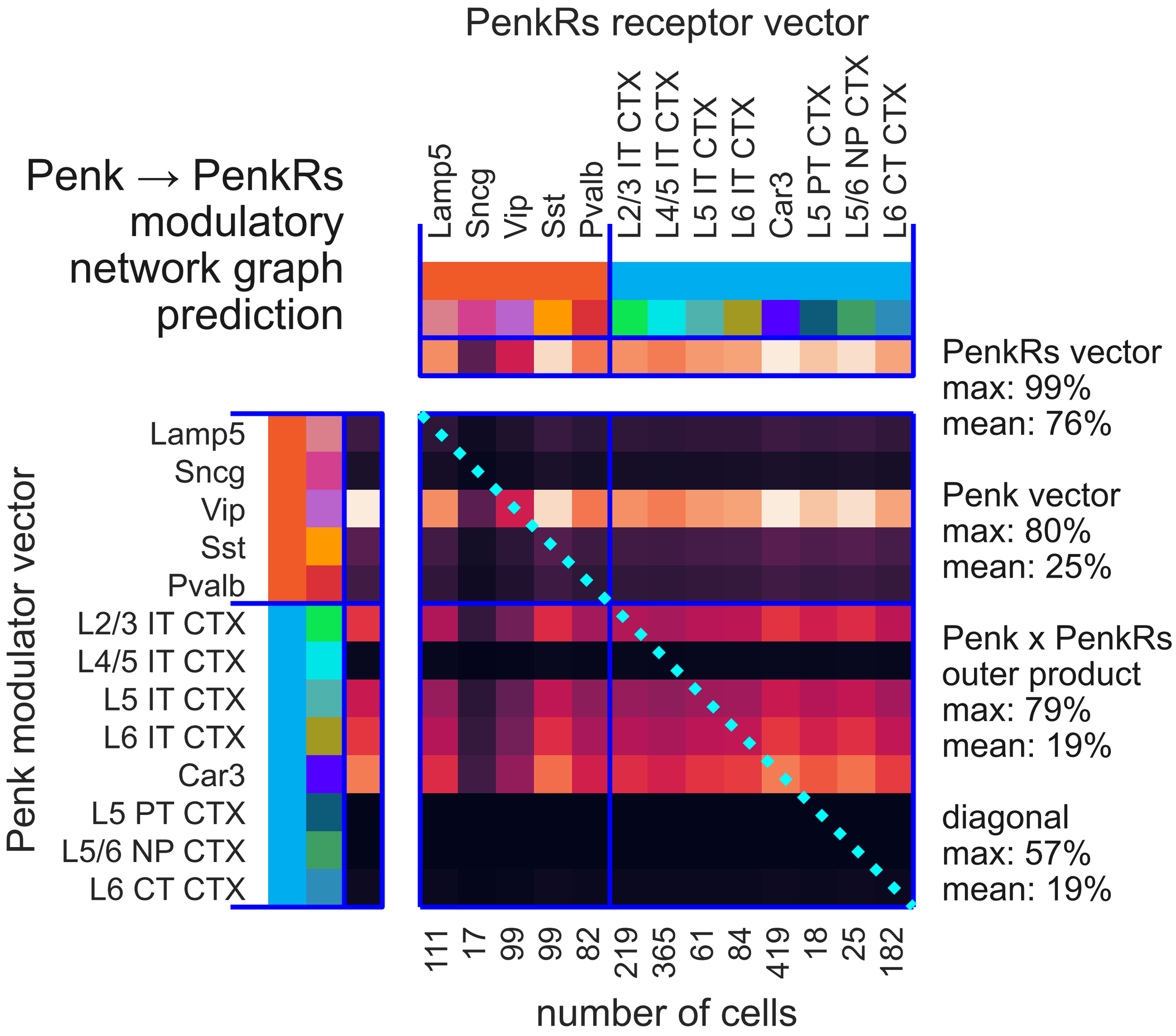
Penk vector
max: 83%
mean: 18%

Penk x PenkRs
outer product
max: 83%
mean: 14%

diagonal
max: 41%
mean: 13%


Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)
PenkRs receptor vector
Penk → PenkRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Penk modulator vector
210
49
311
12
162
35
1,001
1,387
352
689
11
47
233
546
593
number of cells
PenkRs vector
max: 100%
mean: 78%
Penk vector
max: 92%
mean: 29%
Penk x PenkRs
outer product
max: 92%
mean: 23%
diagonal
max: 92%
mean: 22%

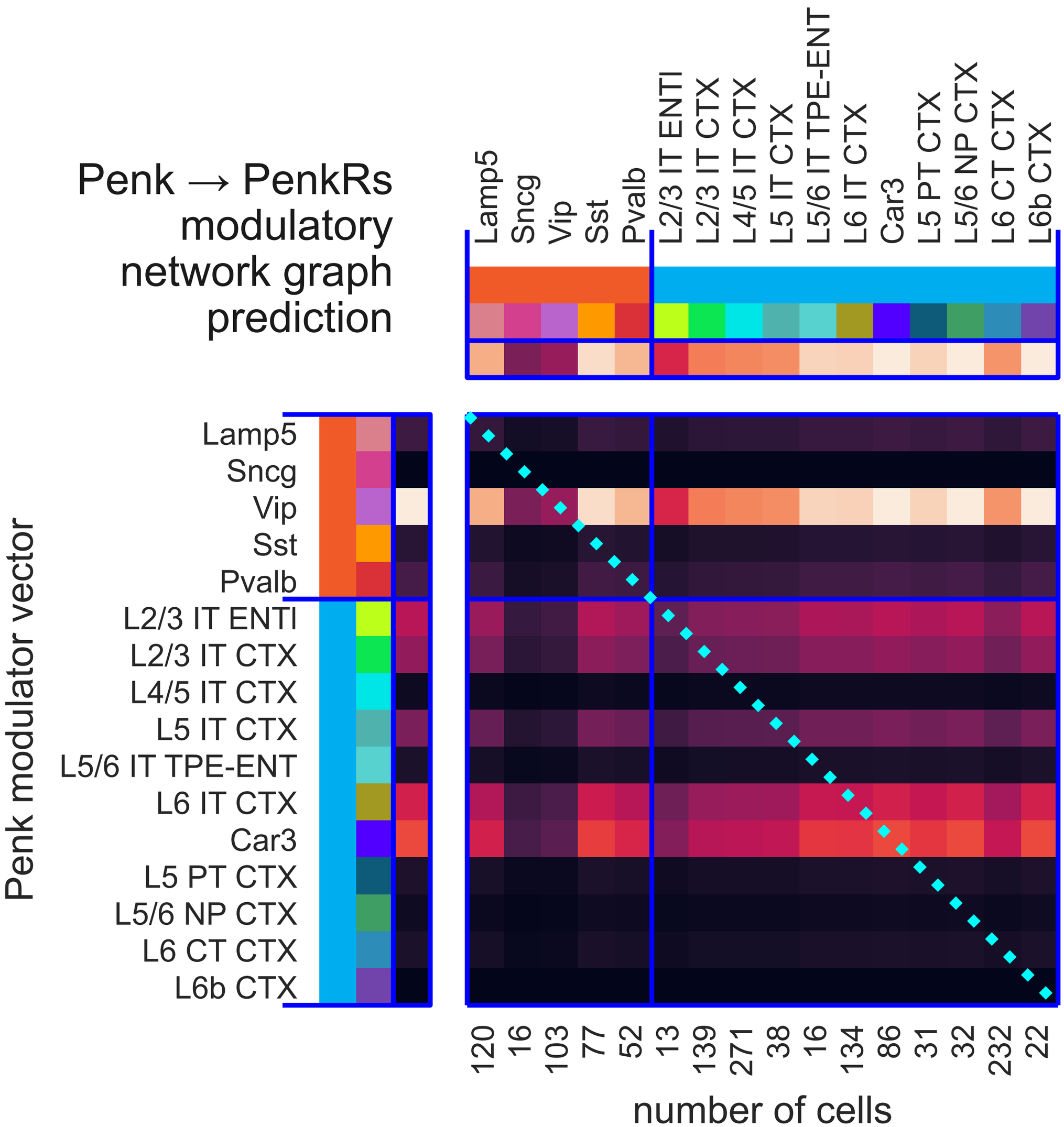
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



Y21ss thr=10 sn:12402
Gustatory Cortex (GU)

PenkRs receptor vector

Penk → PenkRs
modulatory
network graph
prediction



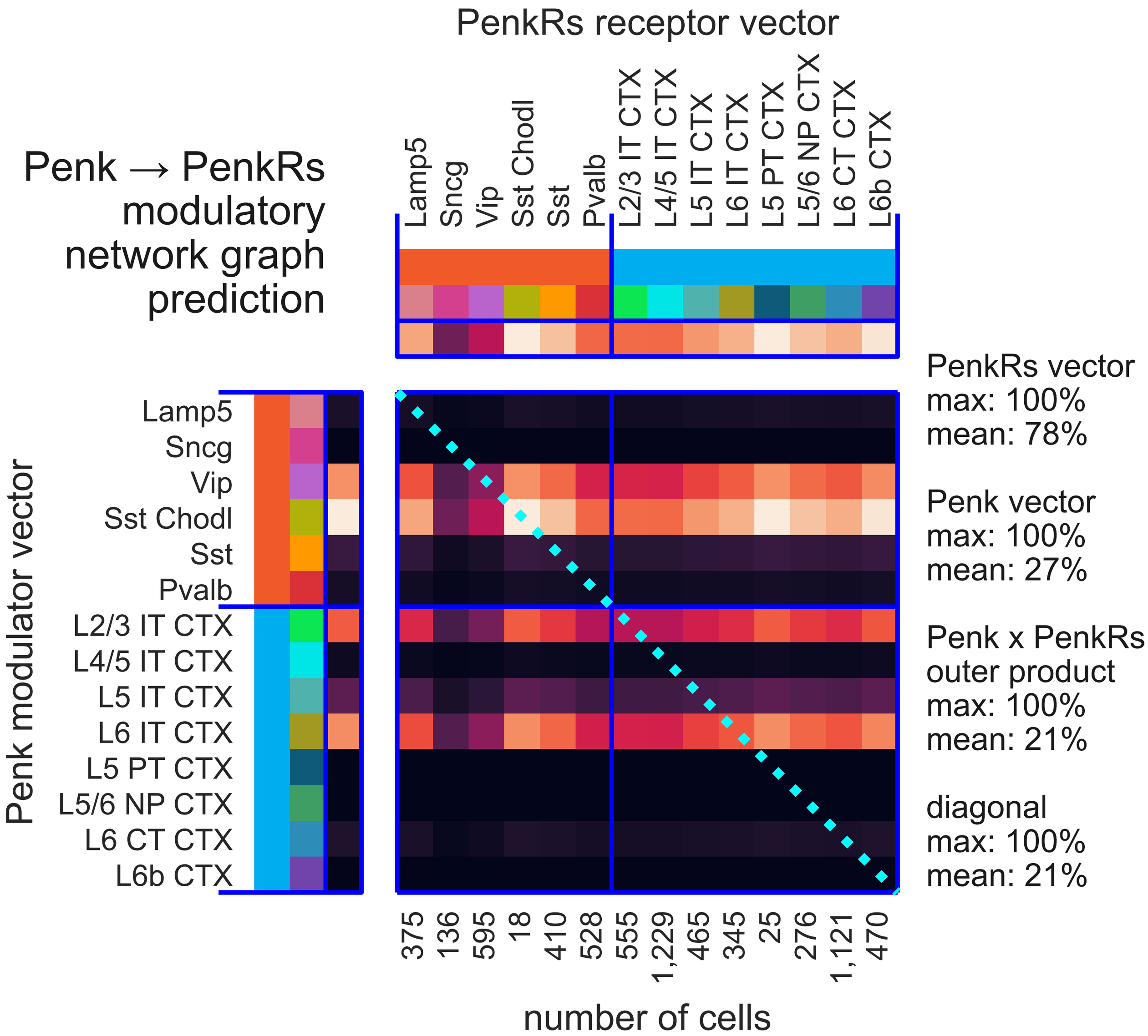
PenkRs vector
max: 100%
mean: 80%

Penk vector
max: 84%
mean: 21%

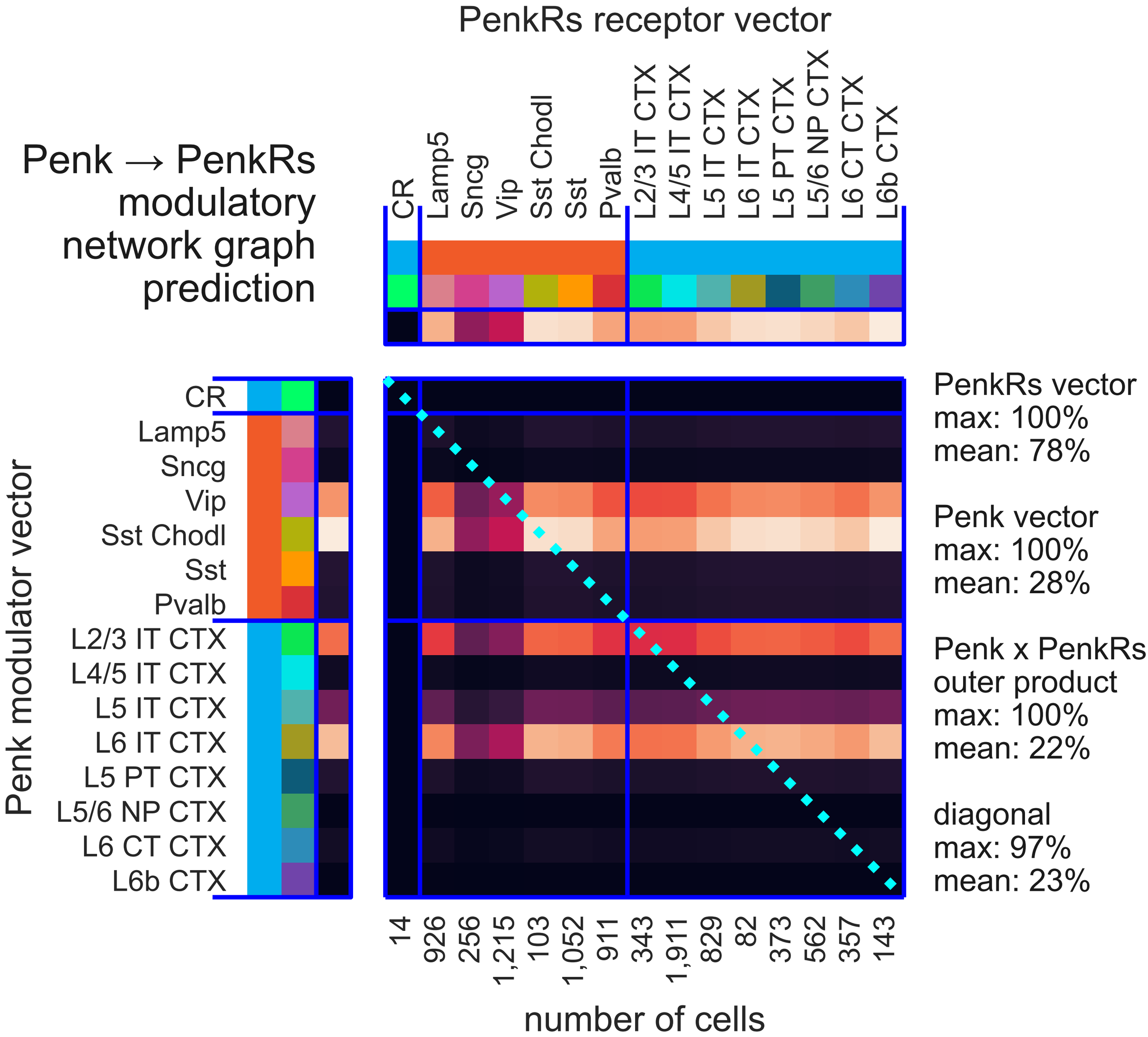
Penk x PenkRs
outer product
max: 84%
mean: 17%

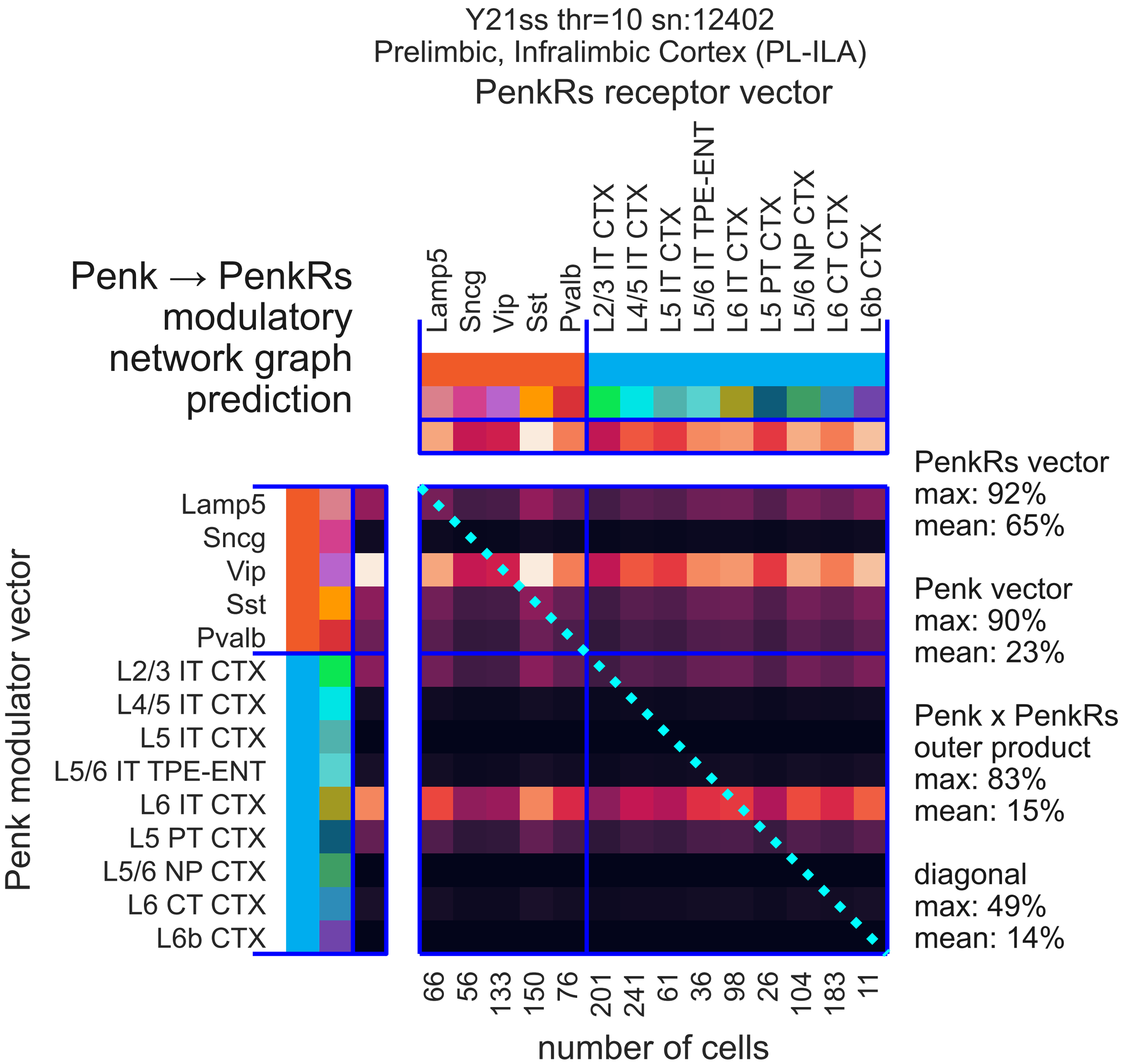
diagonal
max: 52%
mean: 15%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

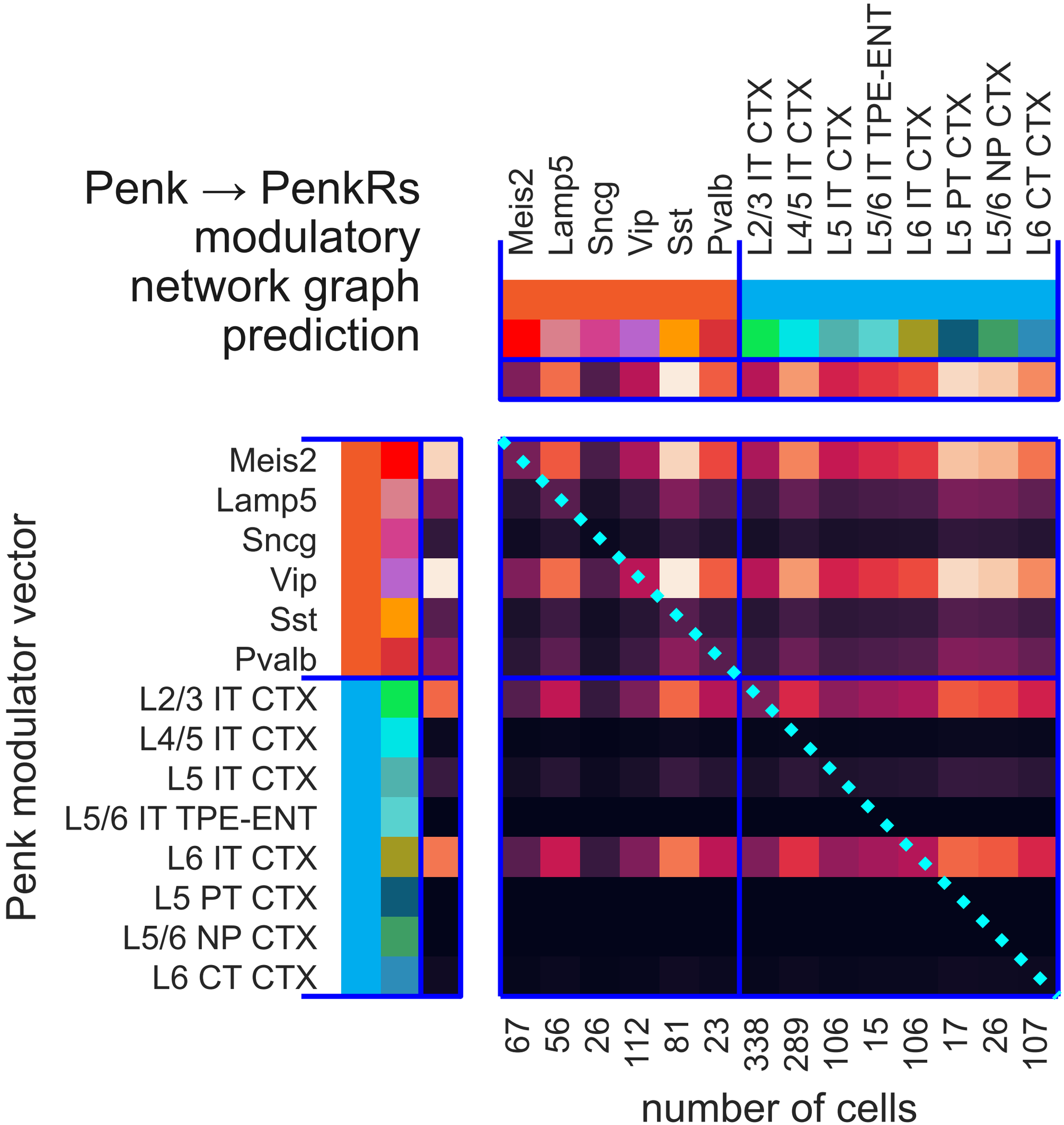



Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)
PenkRs receptor vector
Penk → PenkRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Penk modulator vector
PenkRs vector
max: 92%
mean: 65%
Penk vector
max: 90%
mean: 23%
Penk x PenkRs
outer product
max: 83%
mean: 15%
diagonal
max: 49%
mean: 14%
66
56
133
150
76
201
241
61
36
98
26
104
183
11
number of cells

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

PenkRs receptor vector

Penk → PenkRs
modulatory
network graph
prediction



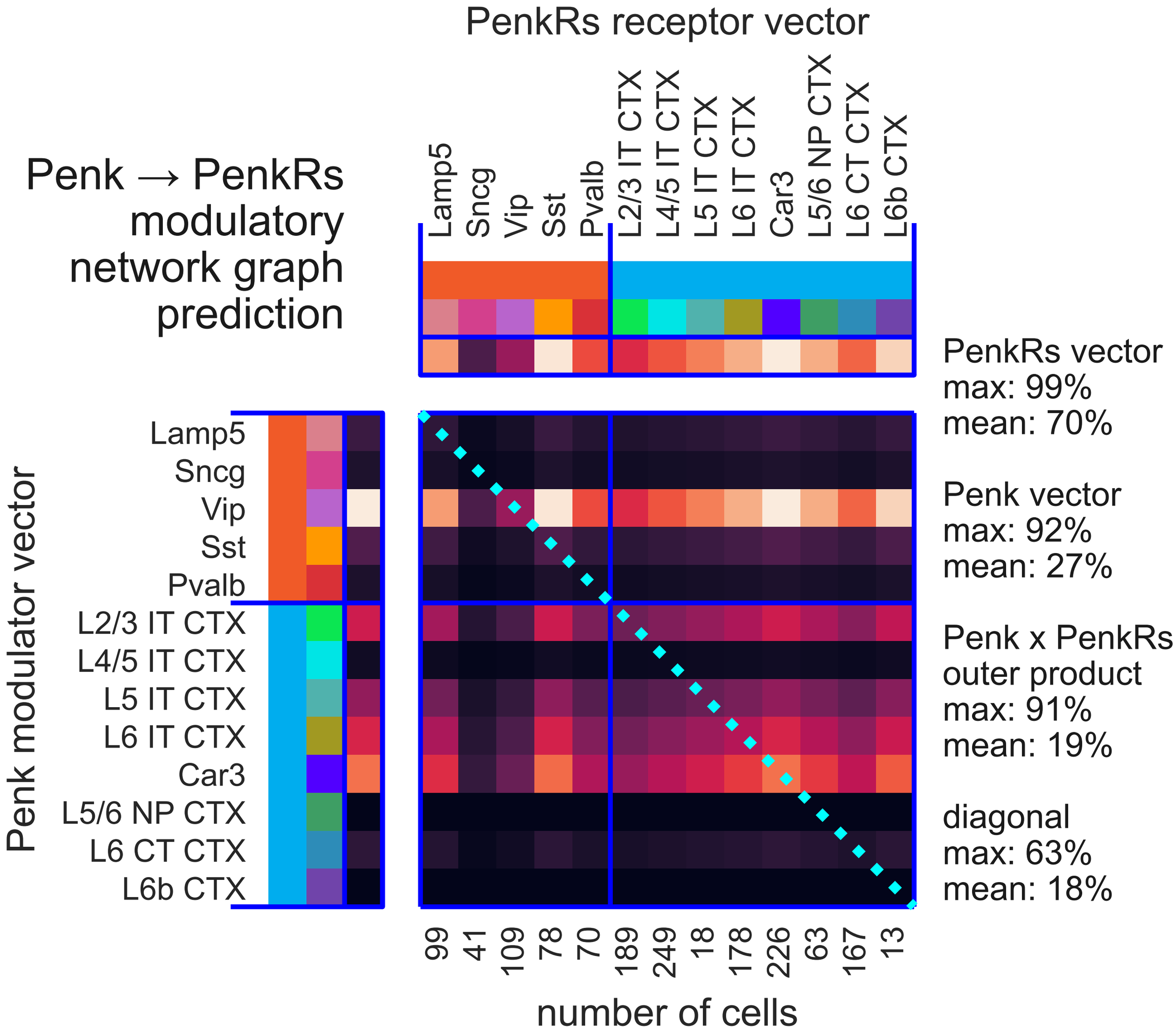
PenkRs vector
max: 93%
mean: 59%

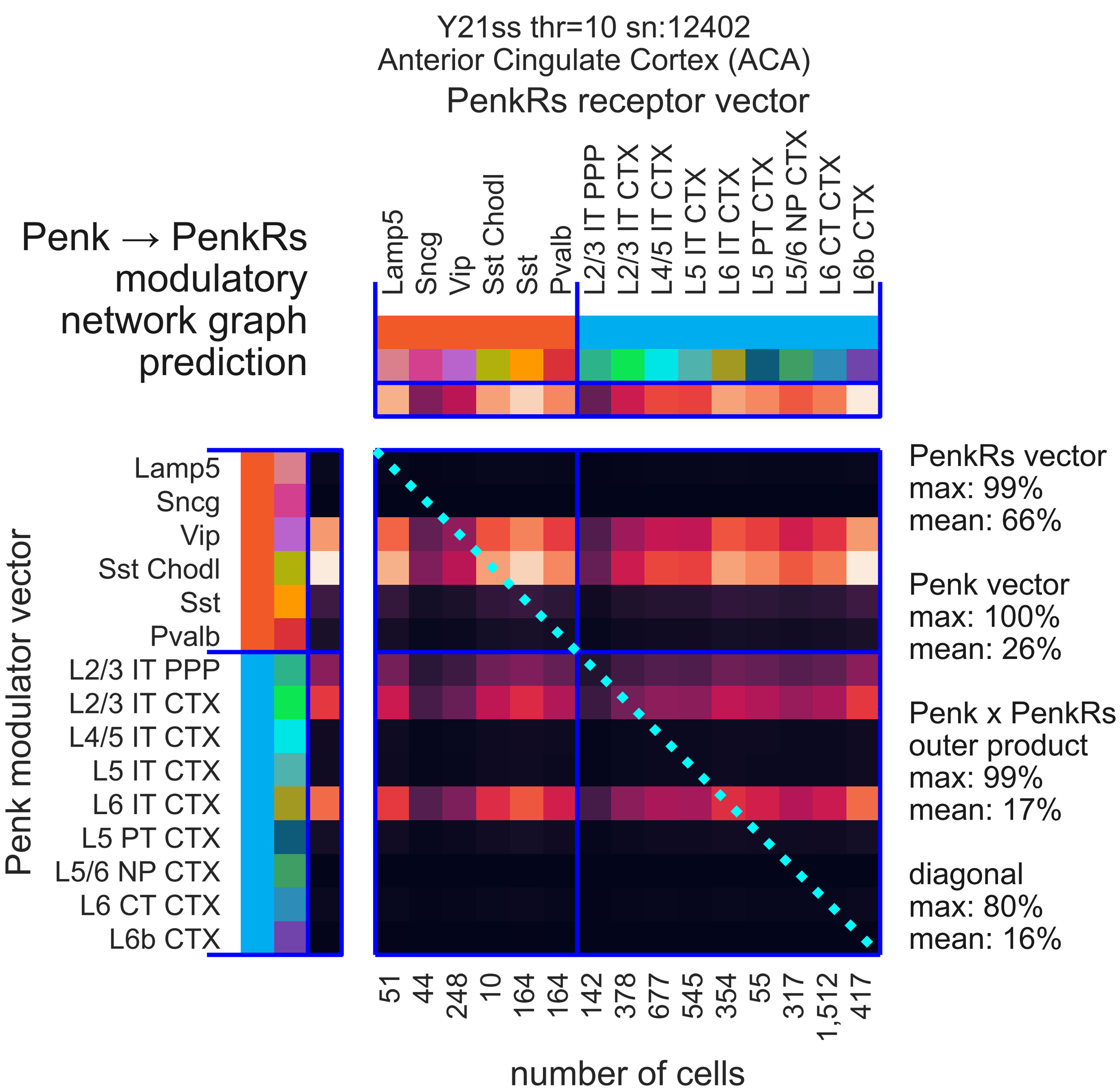
Penk vector
max: 88%
mean: 29%

Penk x PenkRs
outer product
max: 81%
mean: 17%

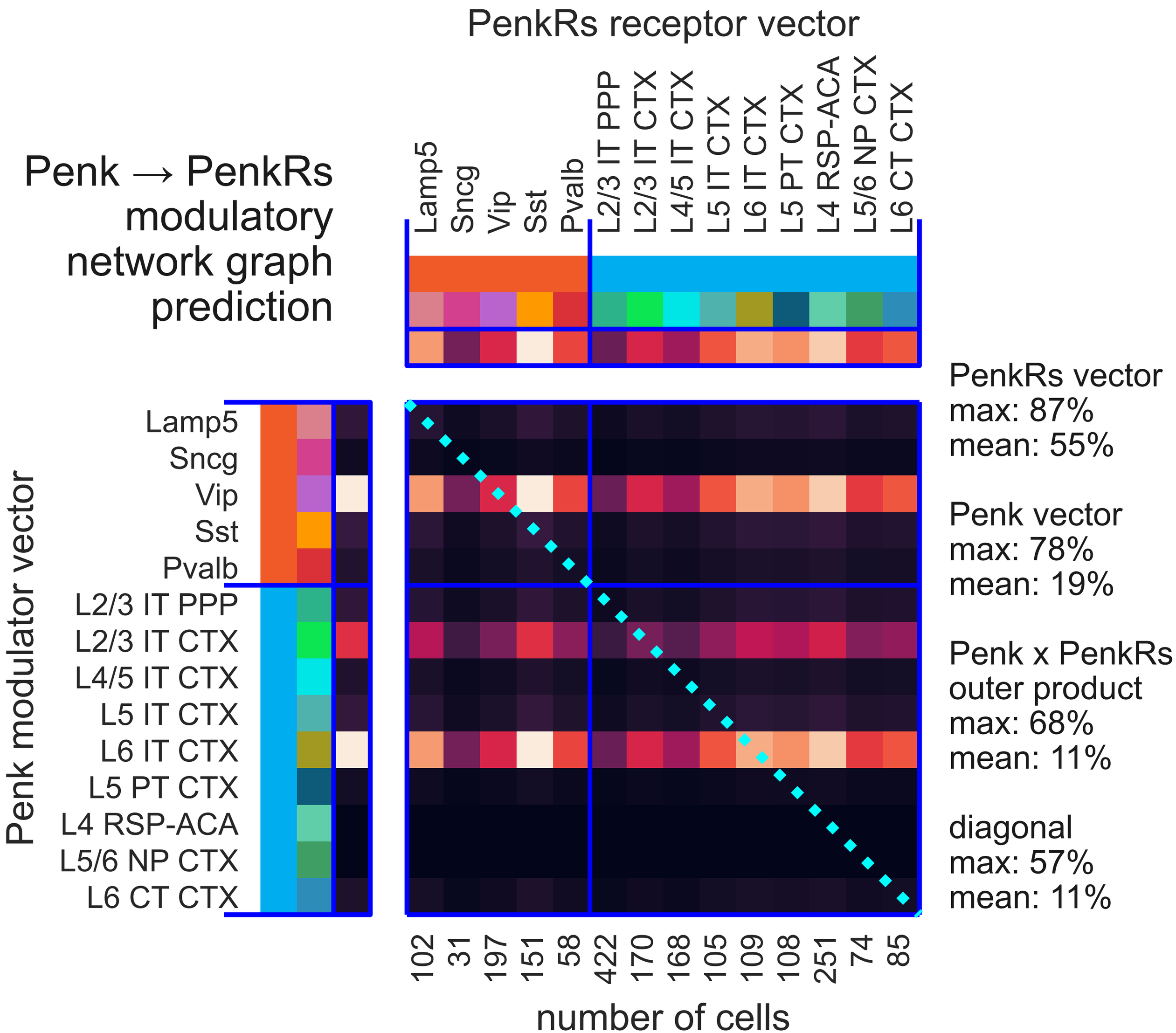
diagonal
max: 37%
mean: 14%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

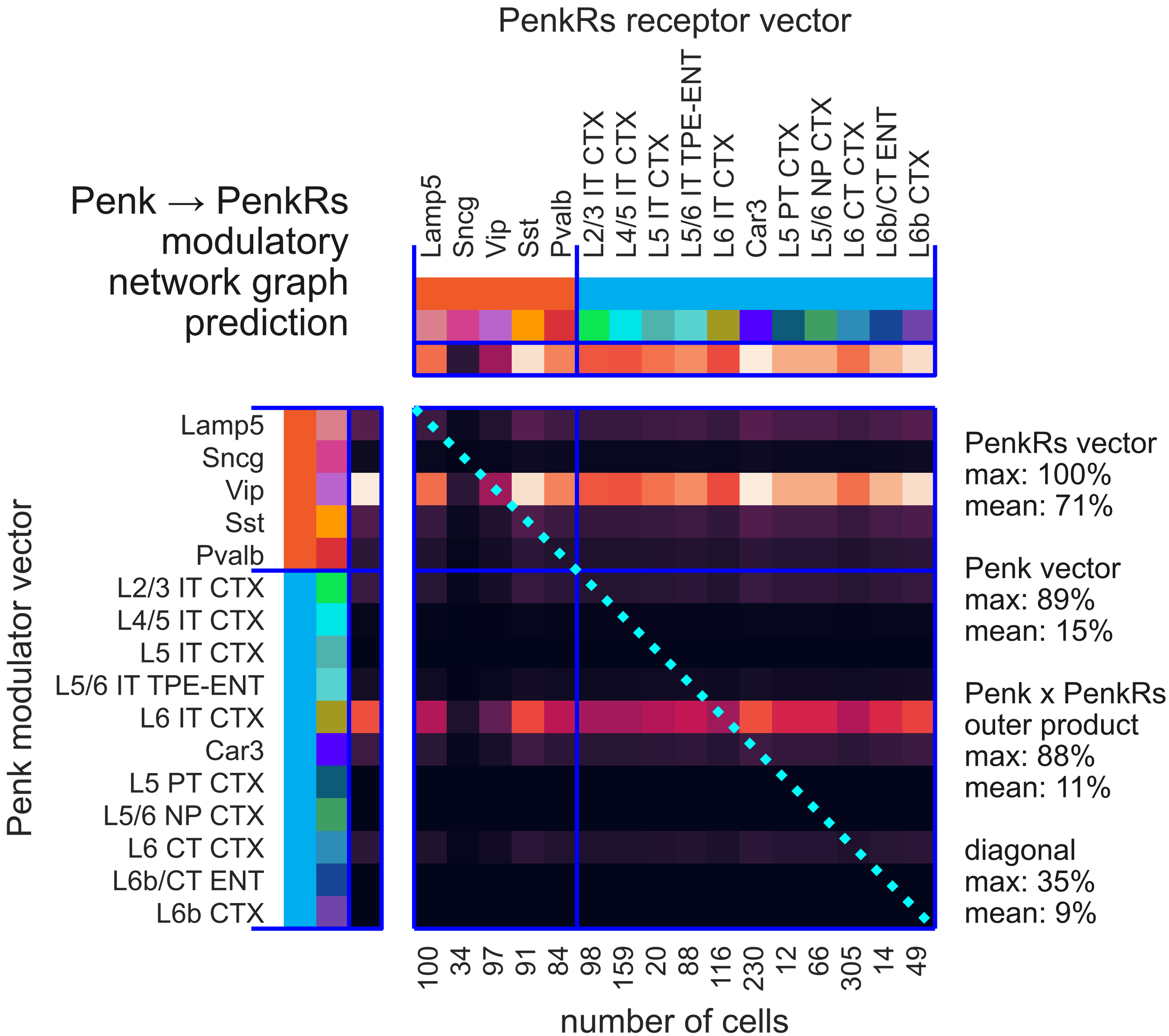



Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)
PenkRs receptor vector
Penk → PenkRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Penk modulator vector
PenkRs vector
max: 99%
mean: 66%
Penk vector
max: 100%
mean: 26%
Penk x PenkRs
outer product
max: 99%
mean: 17%
diagonal
max: 80%
mean: 16%
51
44
248
10
164
164
142
378
677
545
354
55
317
1,512
417
number of cells

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)



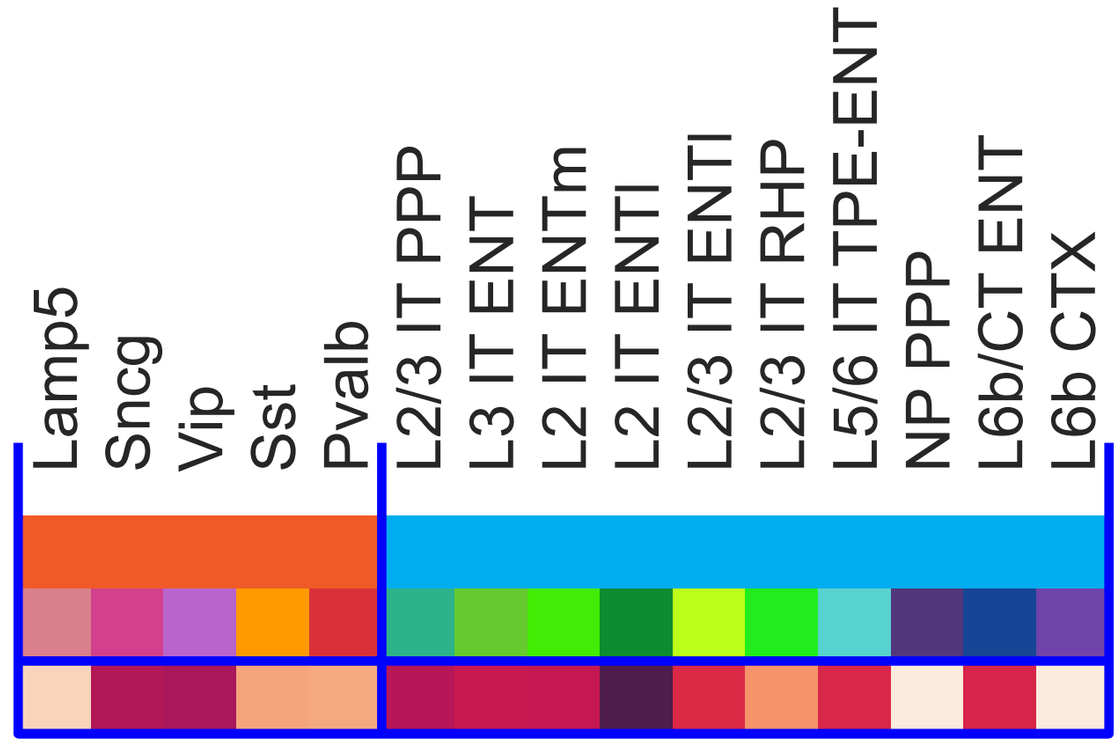
Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

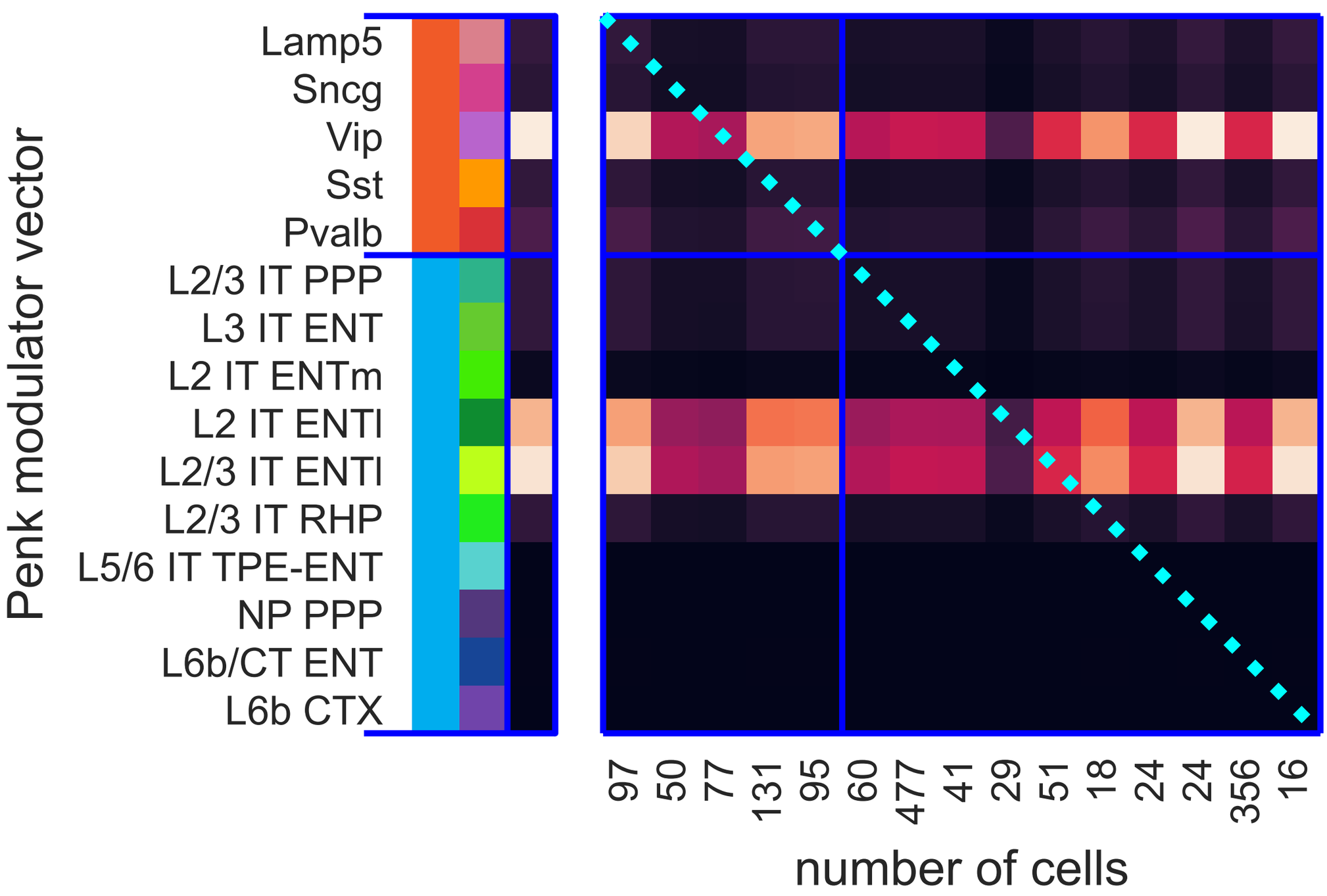


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

PenkRs receptor vector

Penk → PenkRs
modulatory
network graph
prediction





PenkRs vector
max: 100%
mean: 63%

Penk vector
max: 88%
mean: 23%

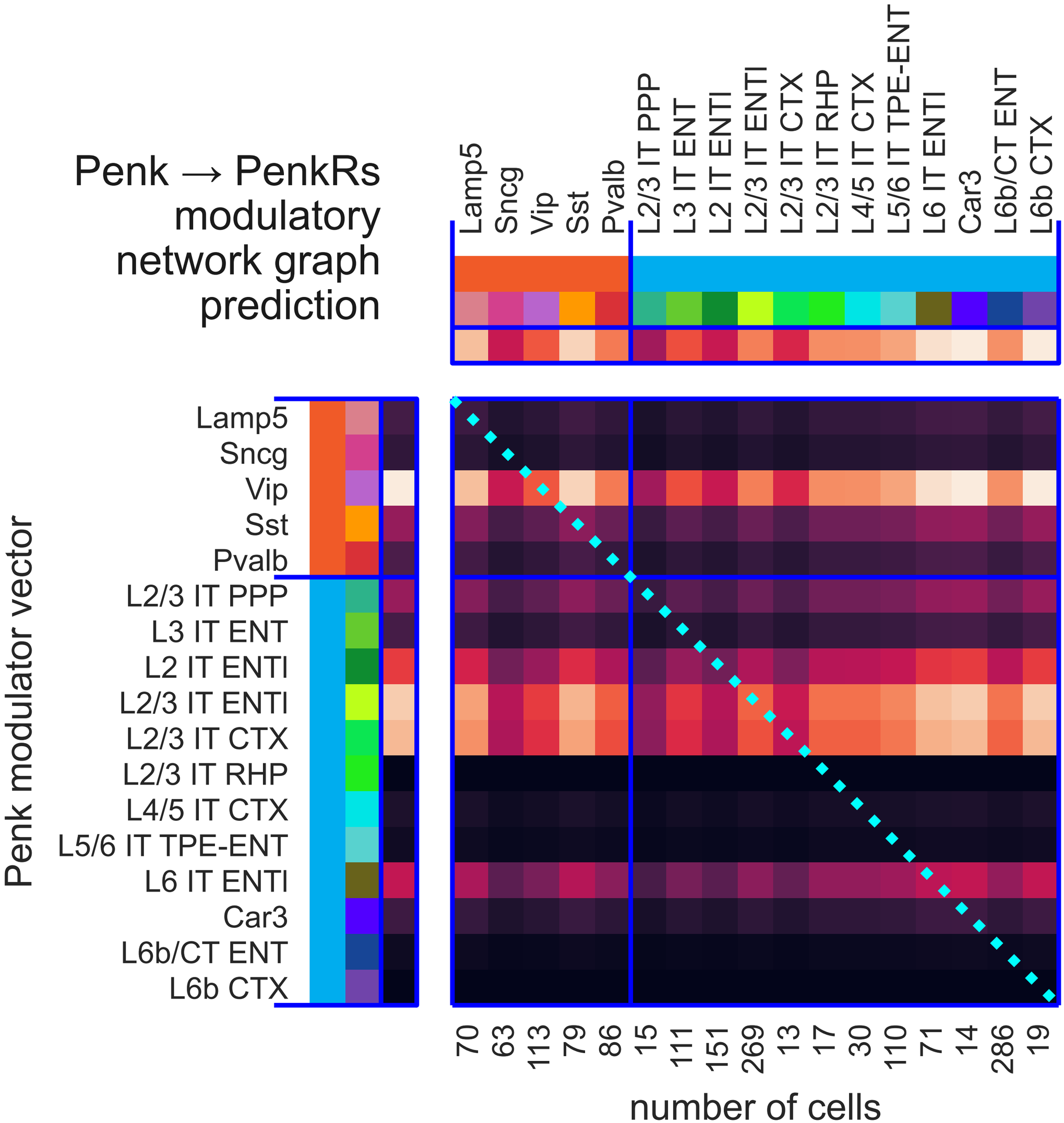
Penk x PenkRs
outer product
max: 88%
mean: 14%

diagonal
max: 47%
mean: 11%

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)

PenkRs receptor vector

Penk → PenkRs
modulatory
network graph
prediction



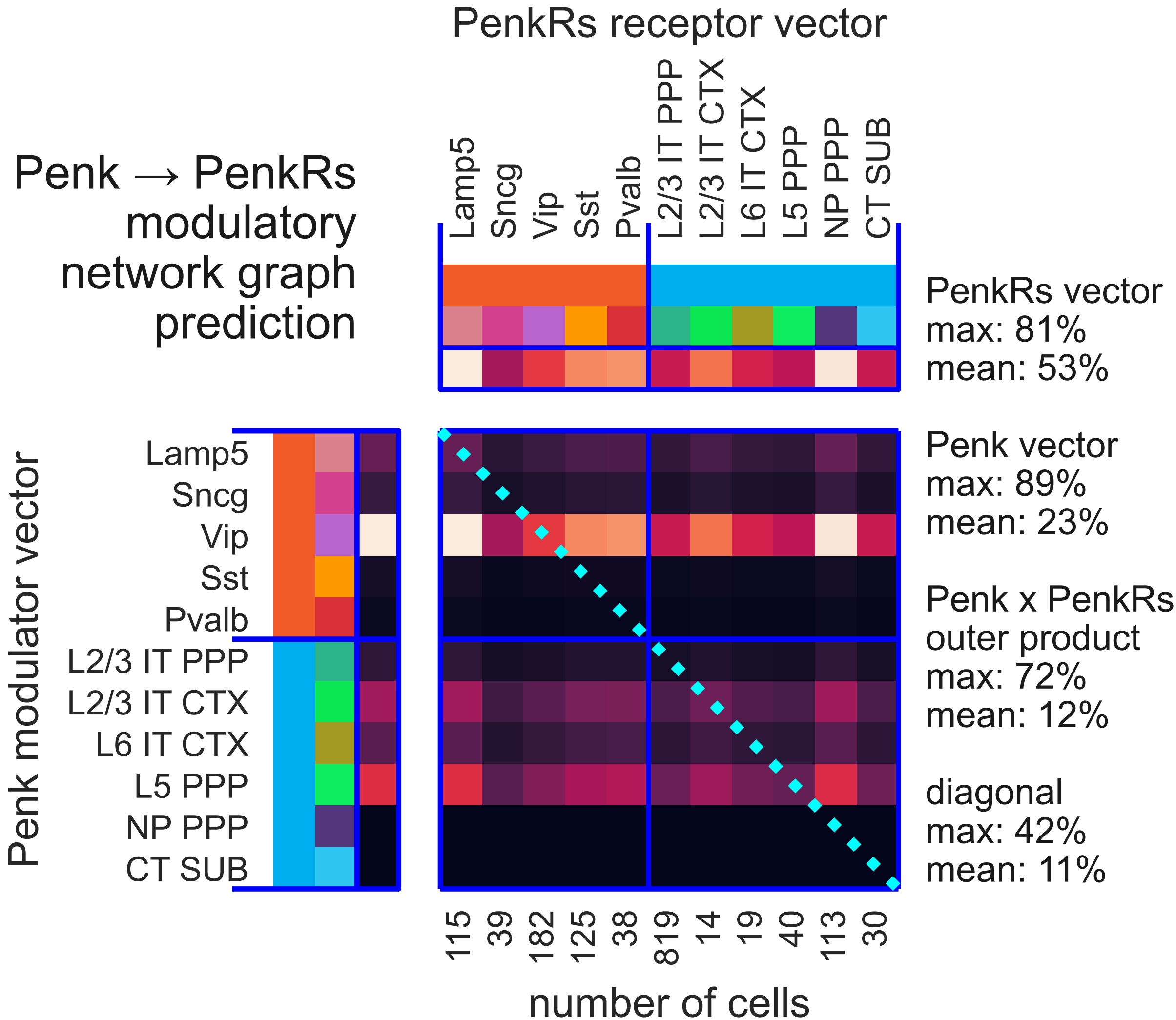
PenkRs vector
max: 100%
mean: 74%

Penk vector
max: 88%
mean: 29%

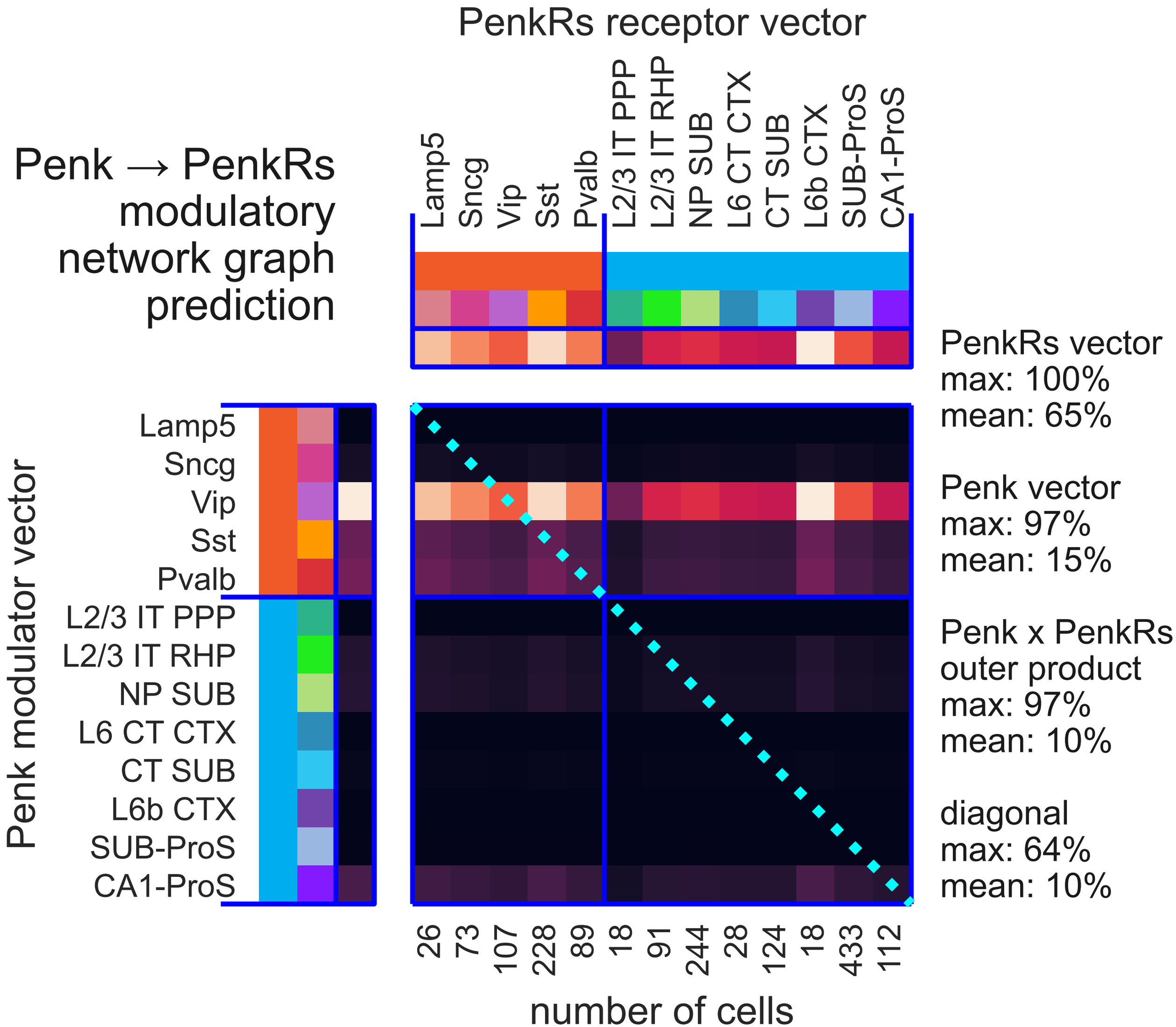
Penk x PenkRs
outer product
max: 88%
mean: 22%

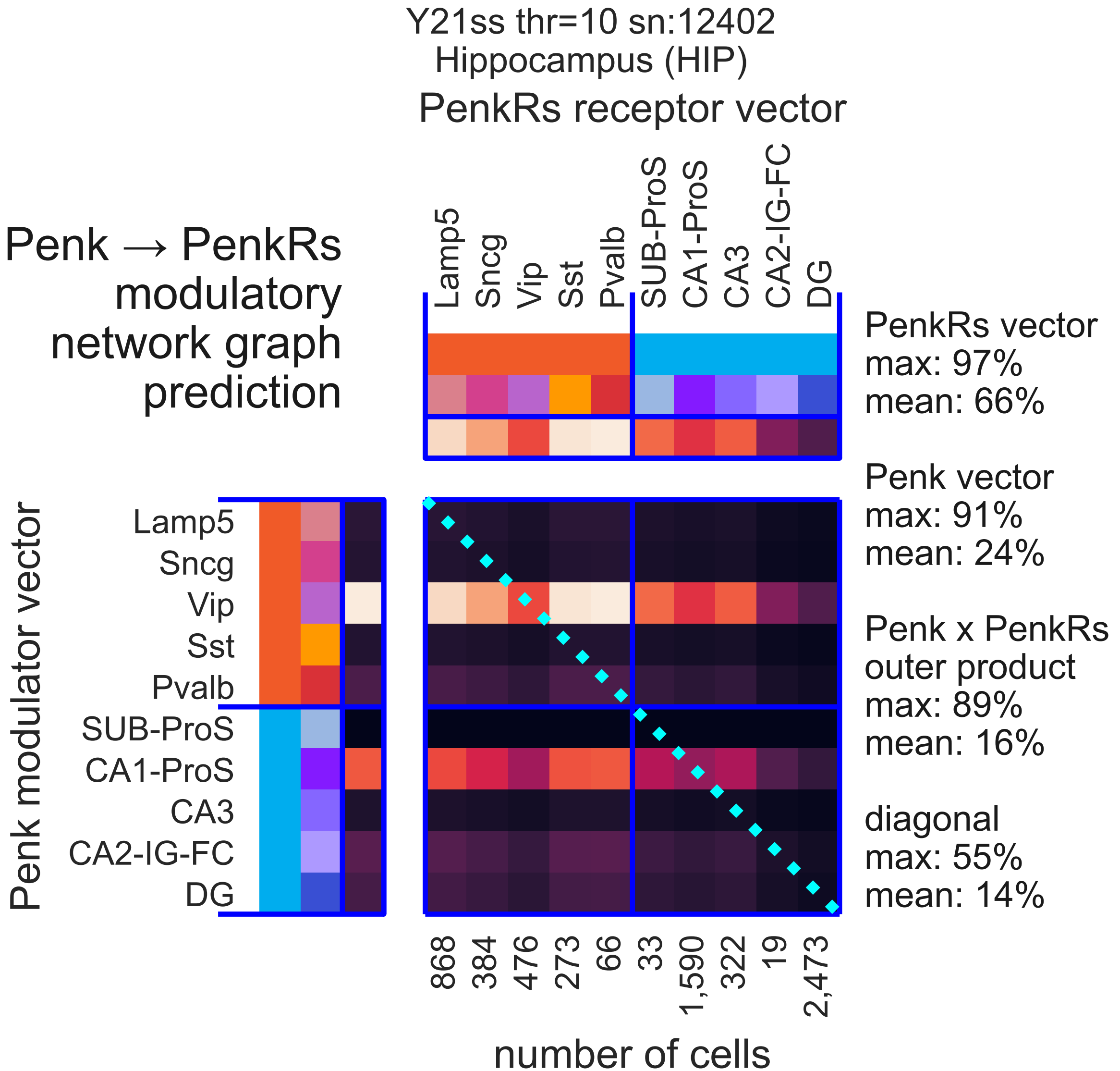
diagonal
max: 59%
mean: 20%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

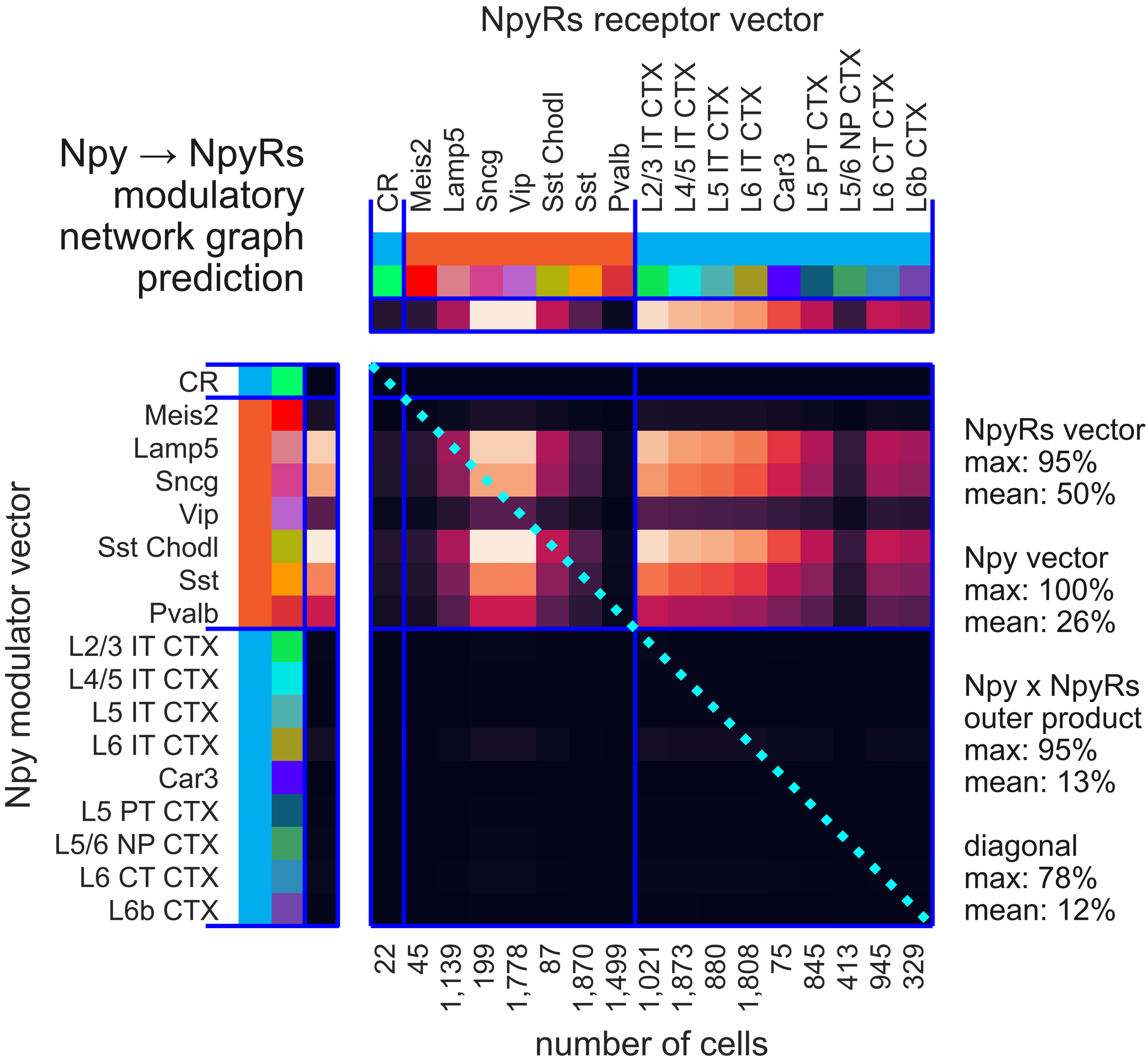


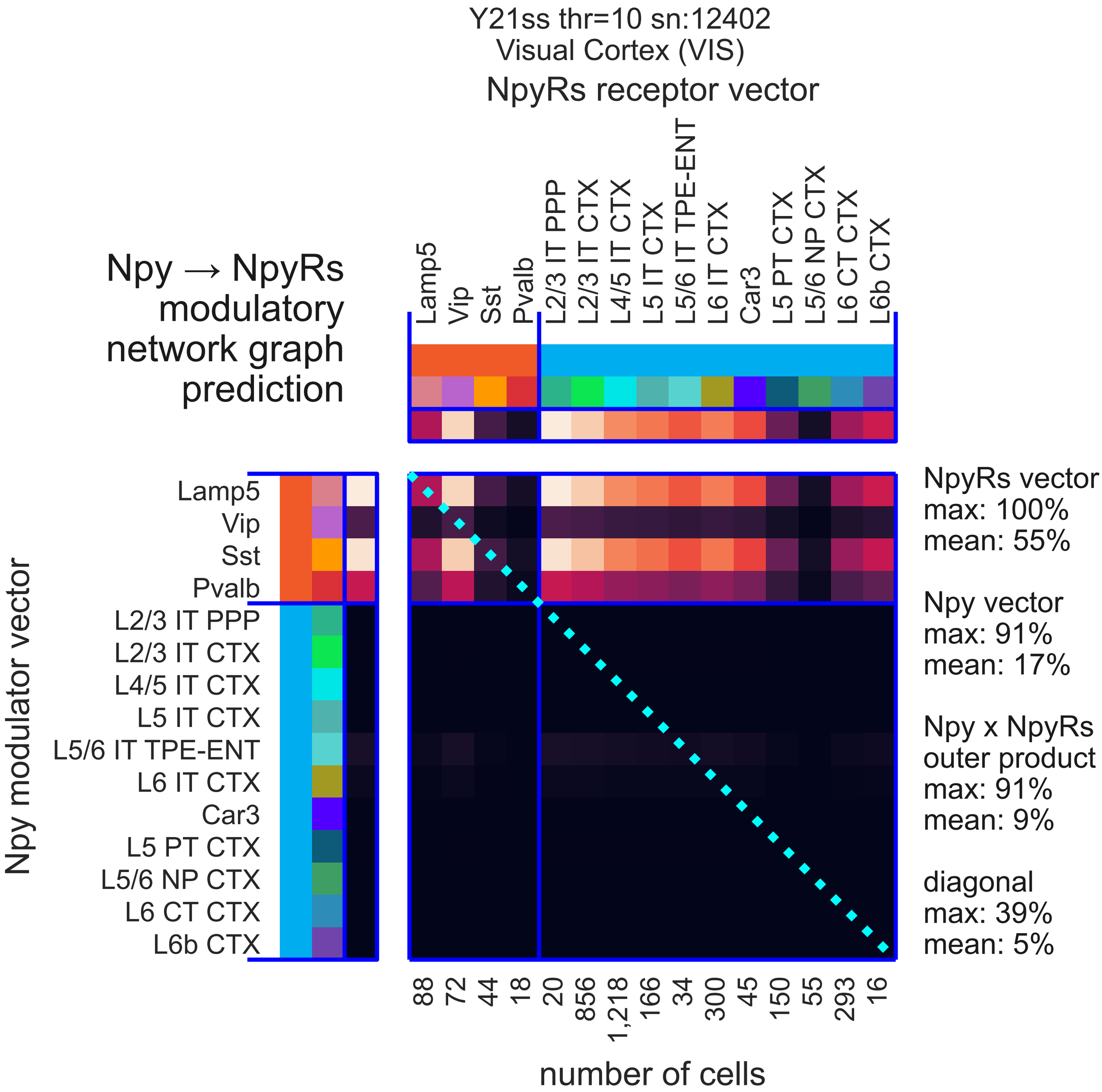
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



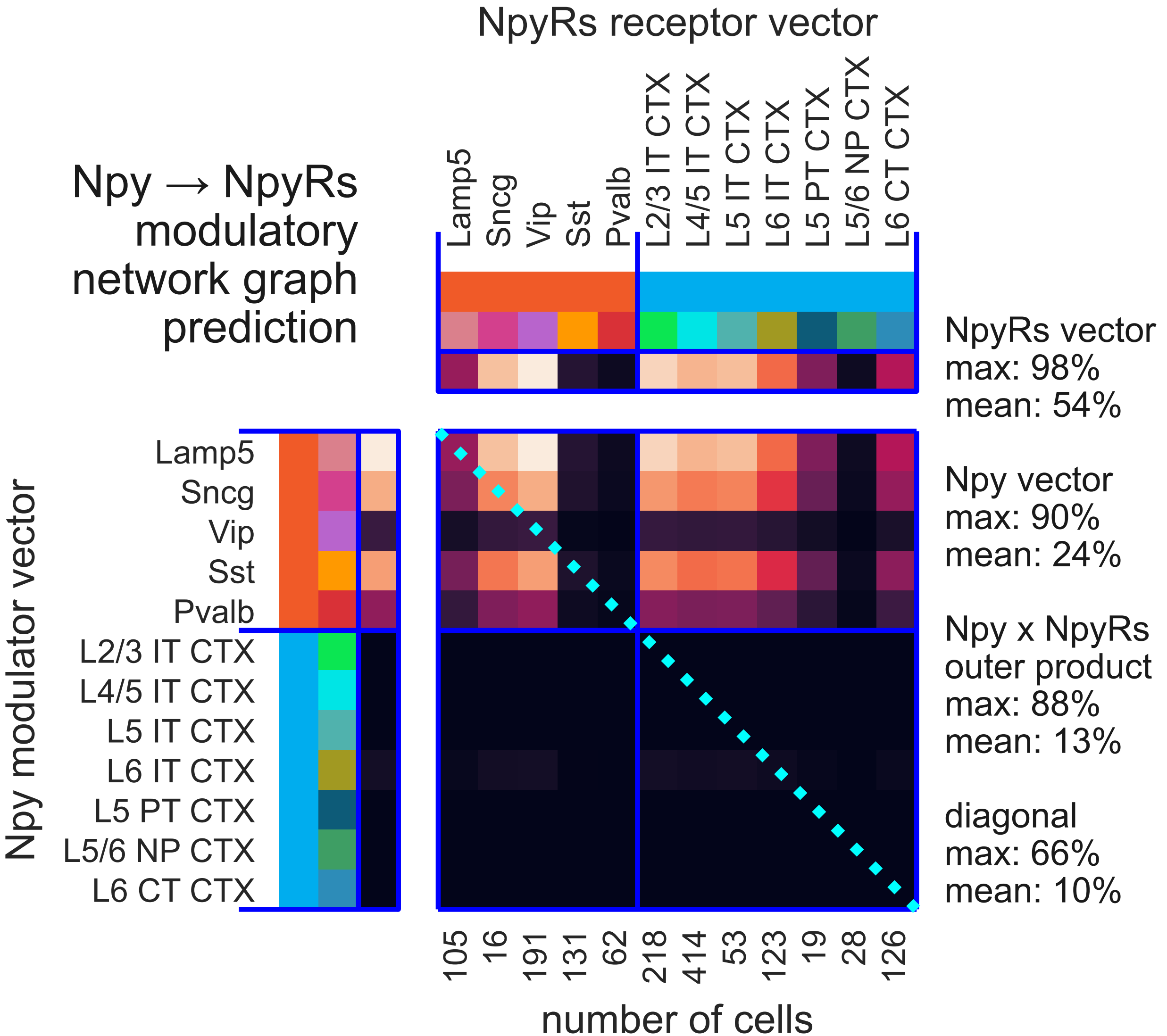

Y21ss thr=10 sn:12402
Hippocampus (HIP)
PenkRs receptor vector
Penk → PenkRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
SUB-ProS
CA1-ProS
CA3
CA2-IG-FC
DG
PenkRs vector
max: 97%
mean: 66%
Penk vector
max: 91%
mean: 24%
Penk modulator vector
Penk x PenkRs
outer product
max: 89%
mean: 16%
diagonal
max: 55%
mean: 14%
868
384
476
273
66
33
1,590
322
19
2,473
number of cells

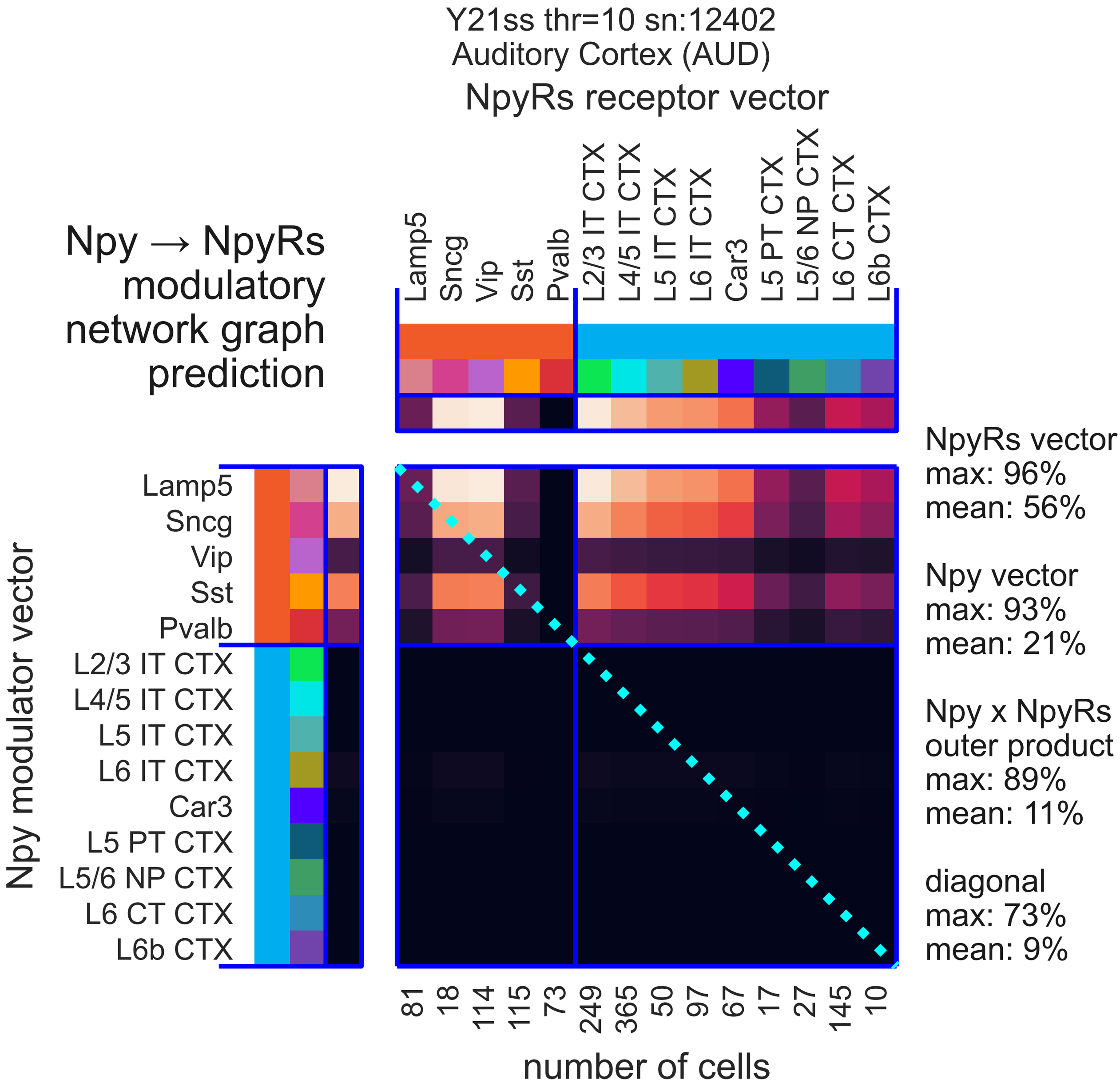
Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



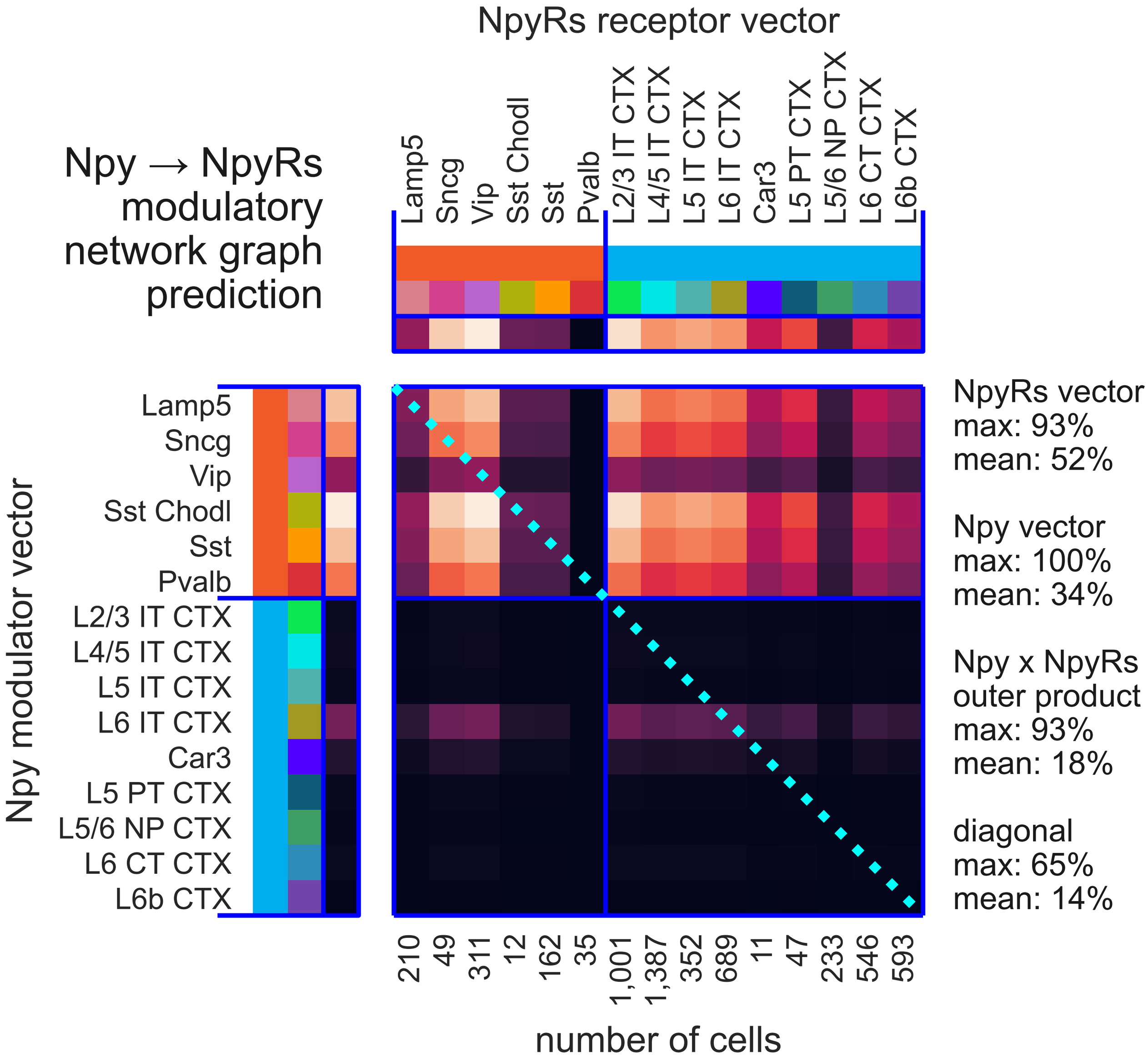

Y21ss thr=10 sn:12402
Visual Cortex (VIS)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Npy modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
NpyRs vector
max: 100%
mean: 55%
Npy vector
max: 91%
mean: 17%
Npy x NpyRs
outer product
max: 91%
mean: 9%
diagonal
max: 39%
mean: 5%

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)

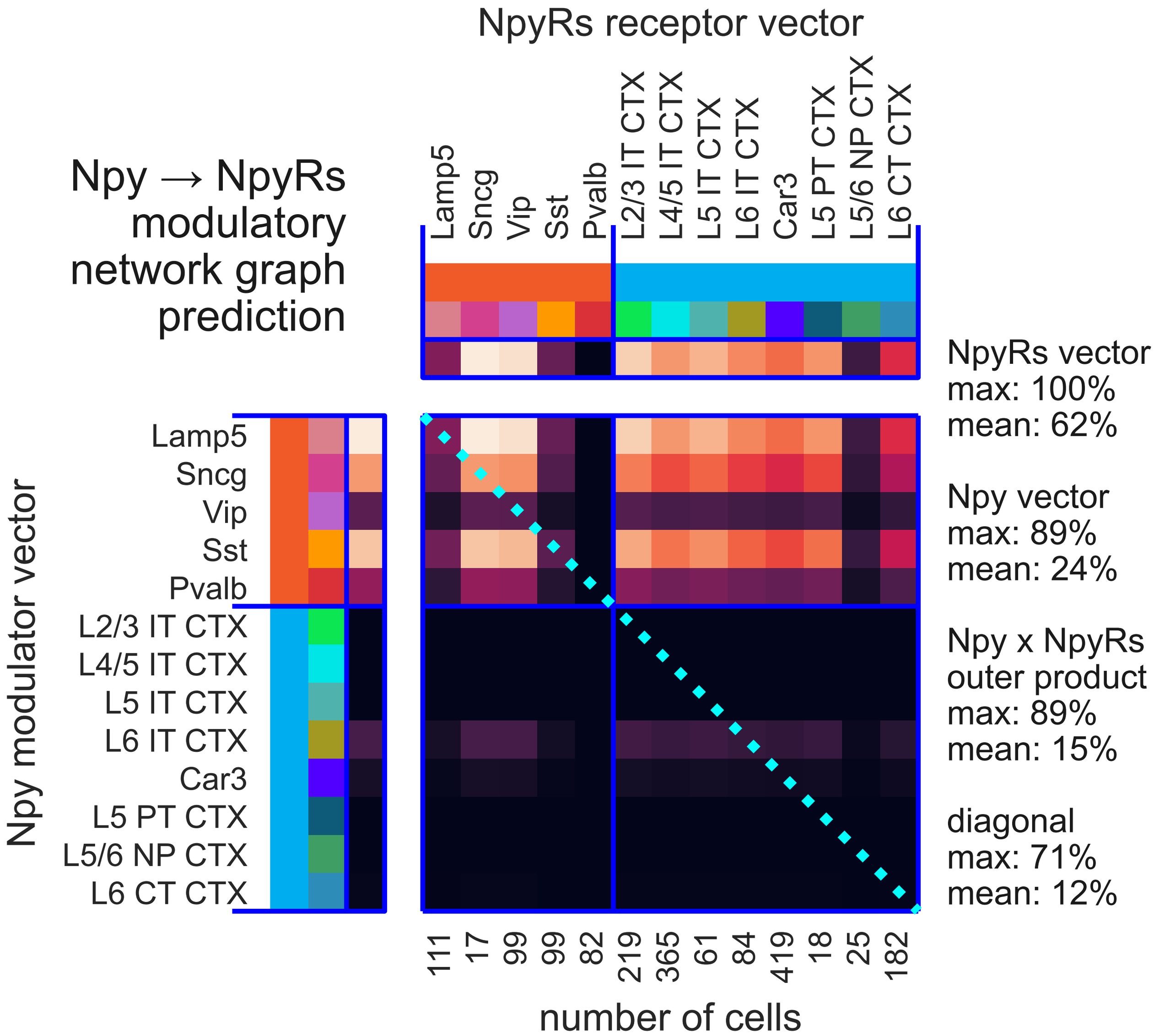


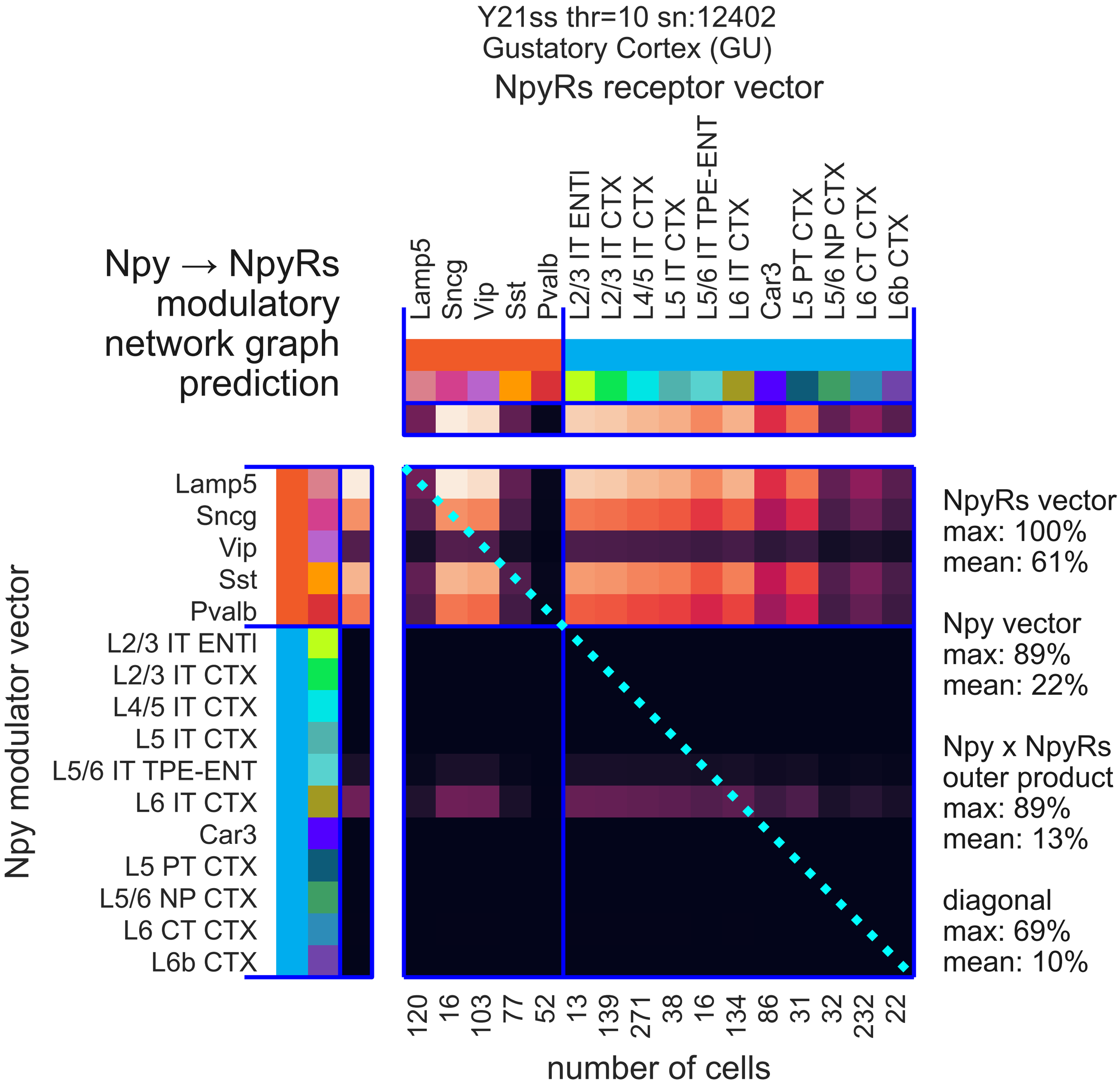

Y21ss thr=10 sn:12402
Auditory Cortex (AUD)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Npy modulator vector
81
18
114
115
73
249
365
50
97
67
17
27
145
10
number of cells
NpyRs vector
max: 96%
mean: 56%
Npy vector
max: 93%
mean: 21%
Npy x NpyRs
outer product
max: 89%
mean: 11%
diagonal
max: 73%
mean: 9%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

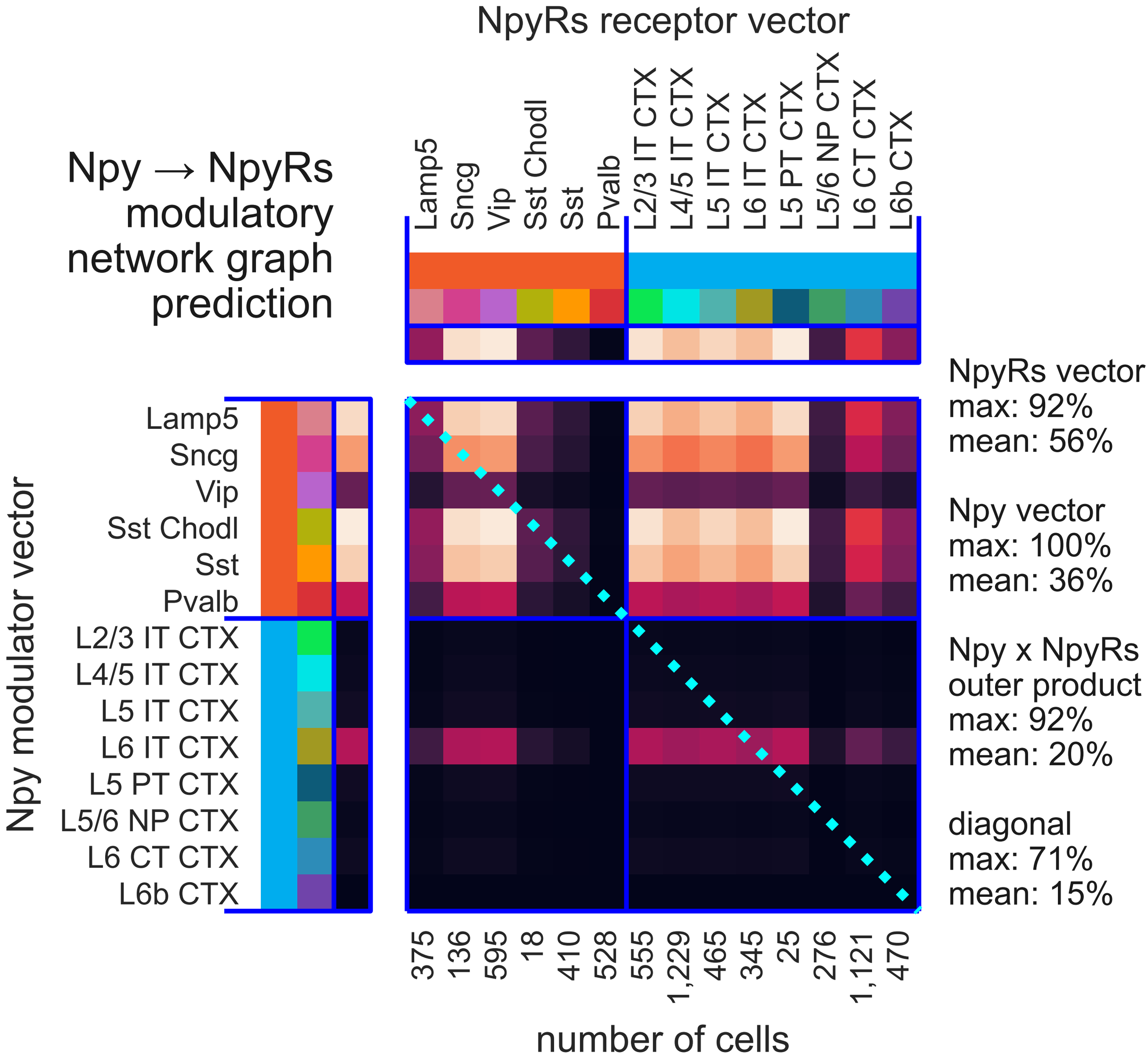


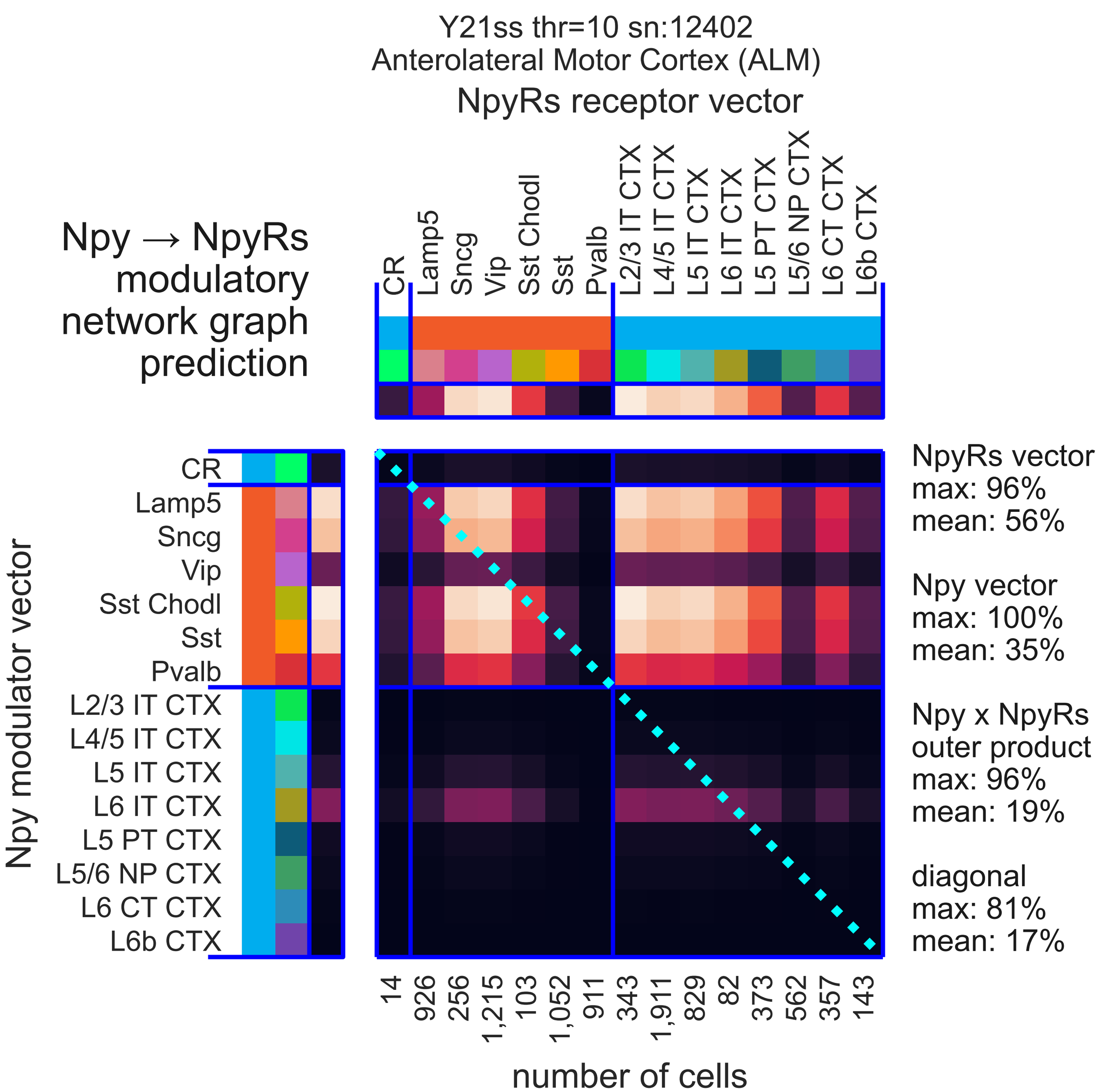
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



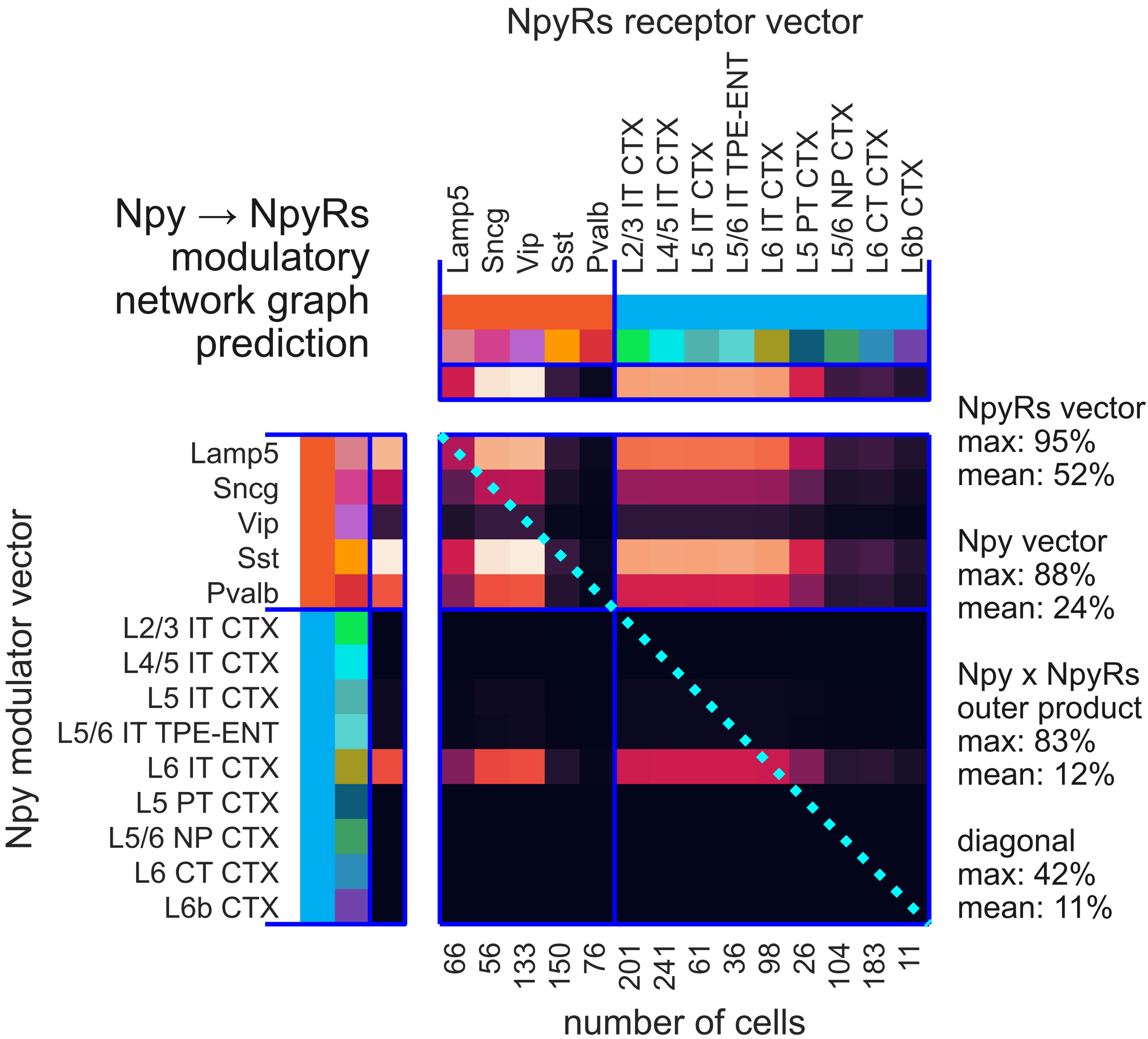

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTl
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Npy modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
NpyRs vector
max: 100%
mean: 61%
Npy vector
max: 89%
mean: 22%
Npy x NpyRs
outer product
max: 89%
mean: 13%
diagonal
max: 69%
mean: 10%

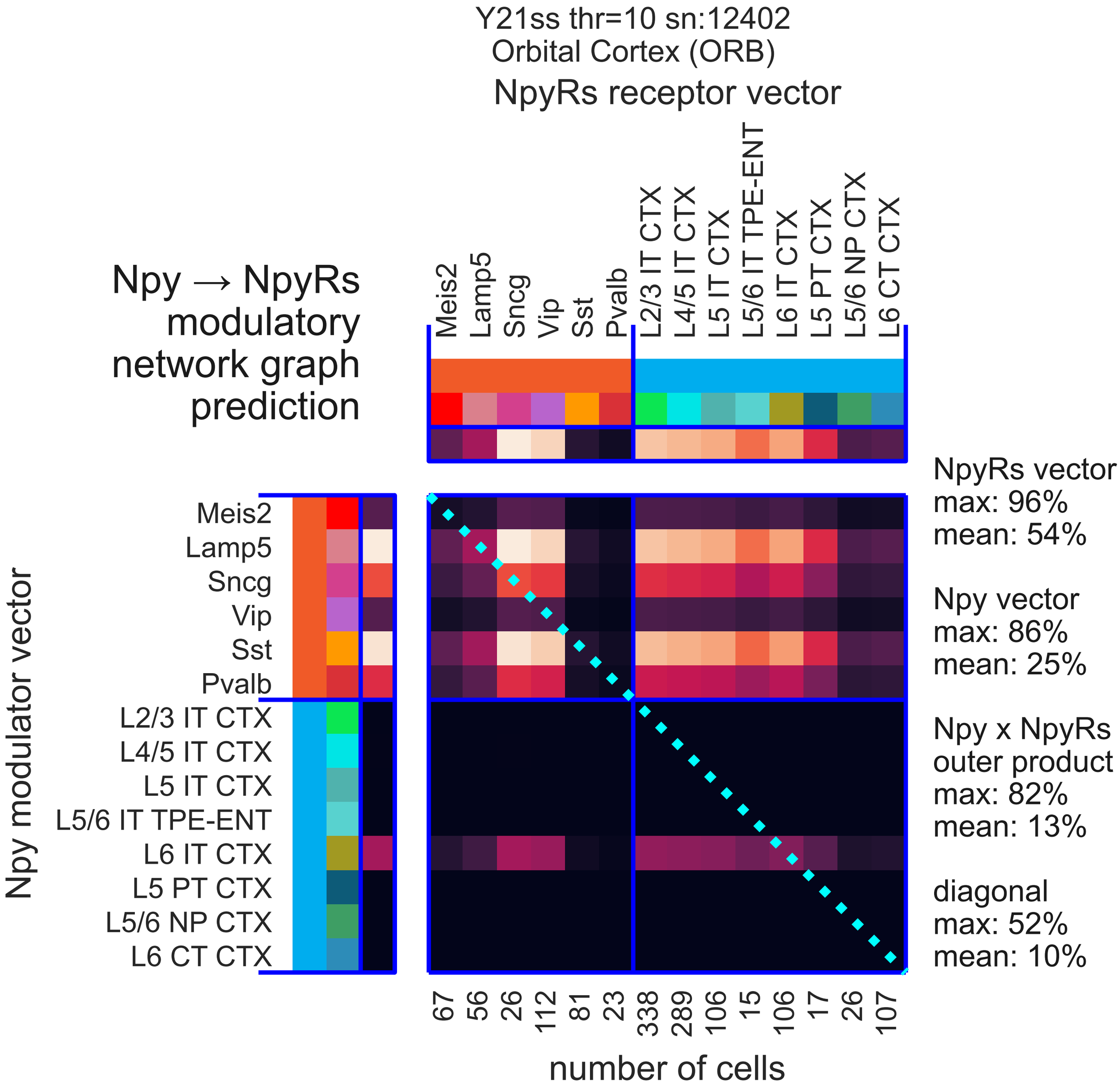
Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



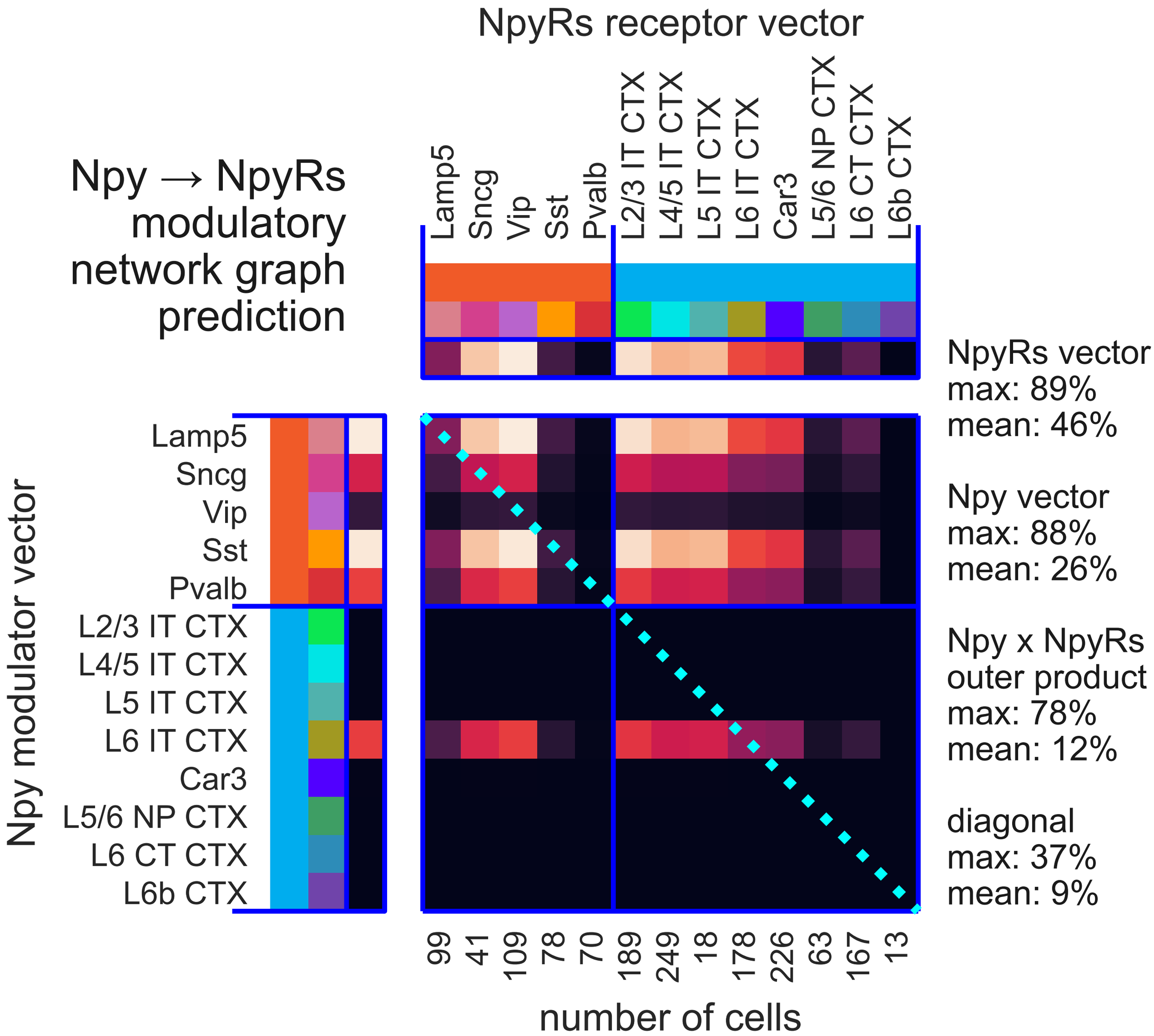

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
CR
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Npy modulator vector
14
926
256
1,215
103
1,052
911
343
1,911
829
82
373
562
357
143
number of cells
NpyRs vector
max: 96%
mean: 56%
Npy vector
max: 100%
mean: 35%
Npy x NpyRs
outer product
max: 96%
mean: 19%
diagonal
max: 81%
mean: 17%

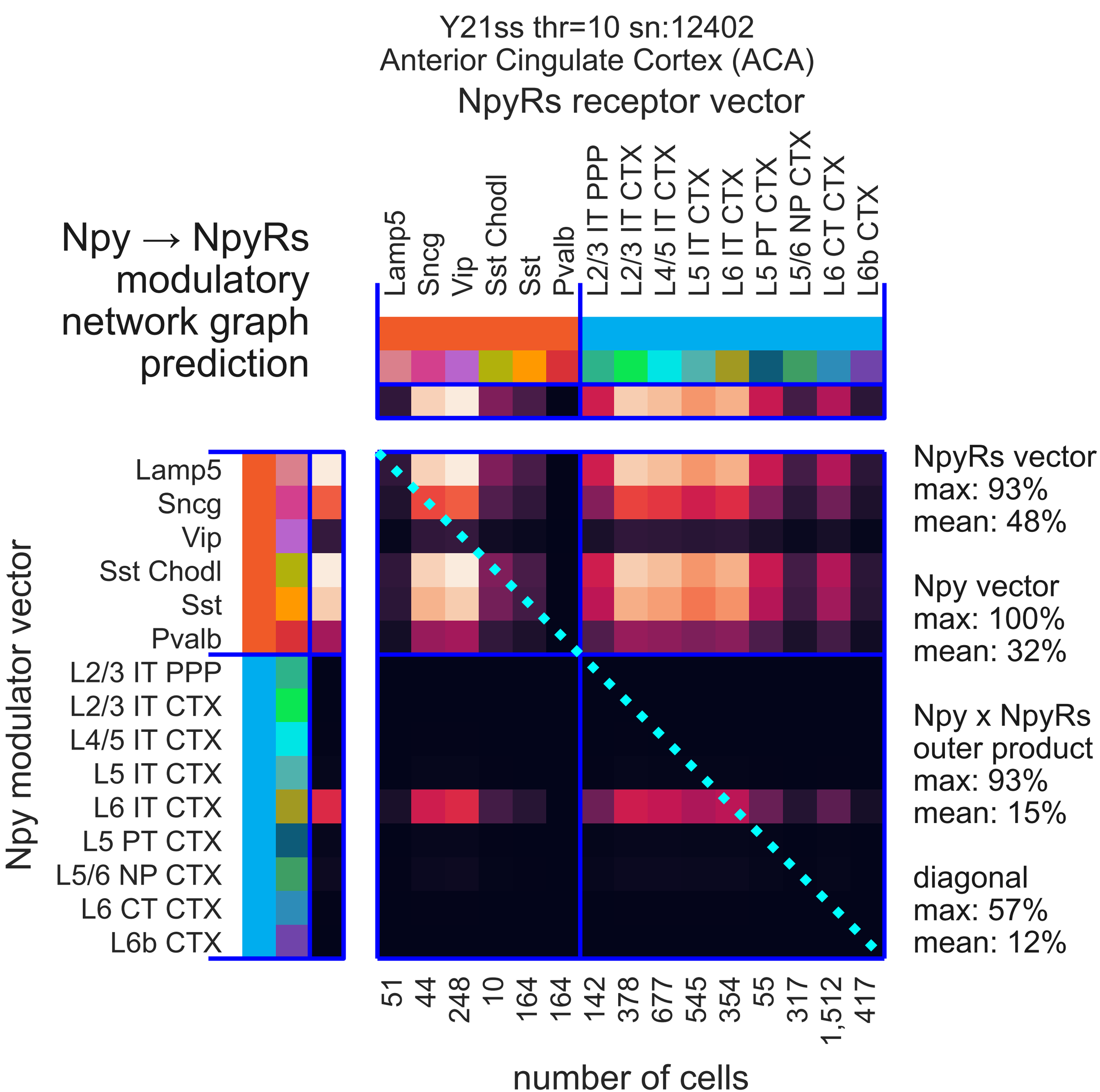
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

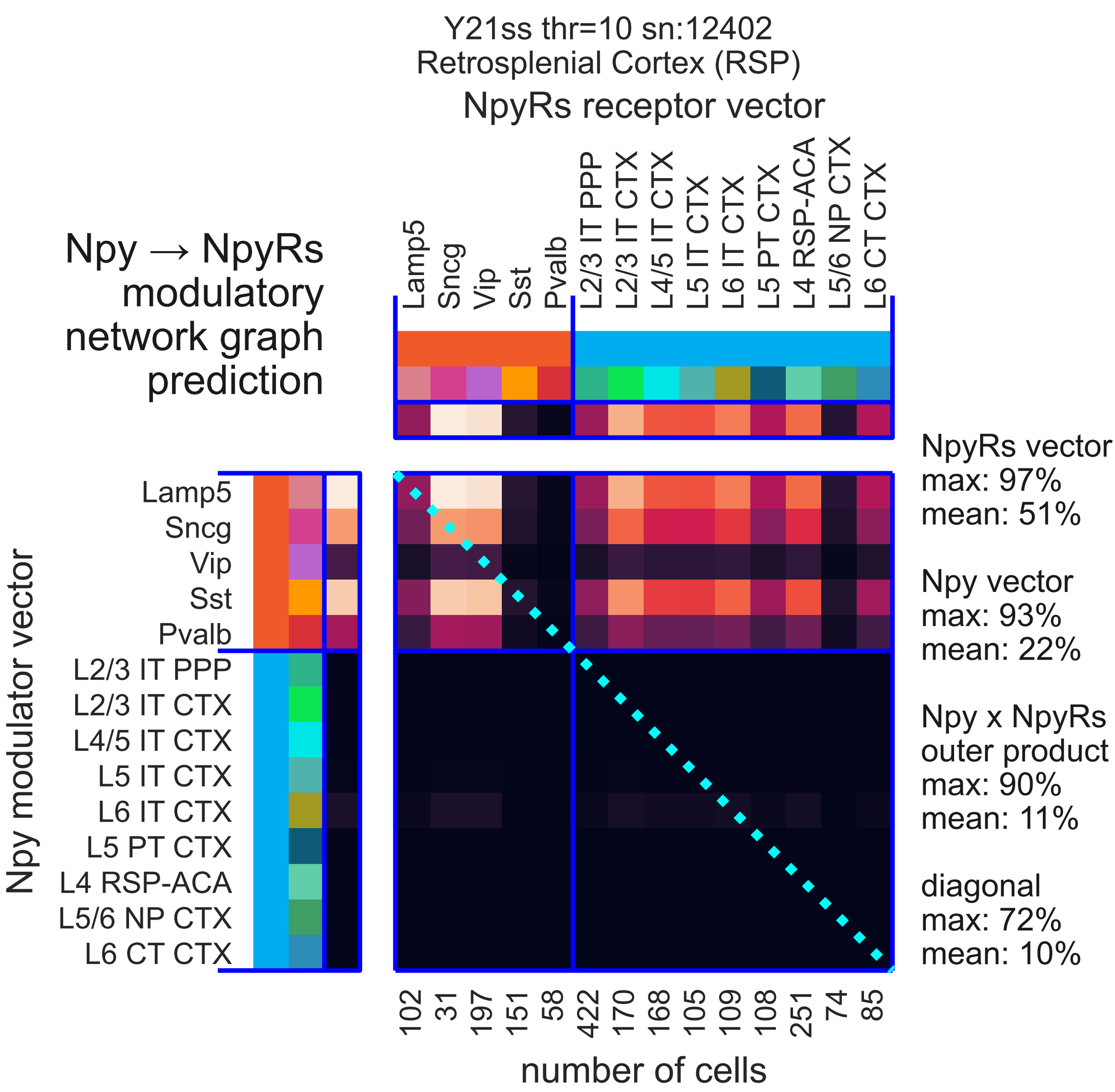


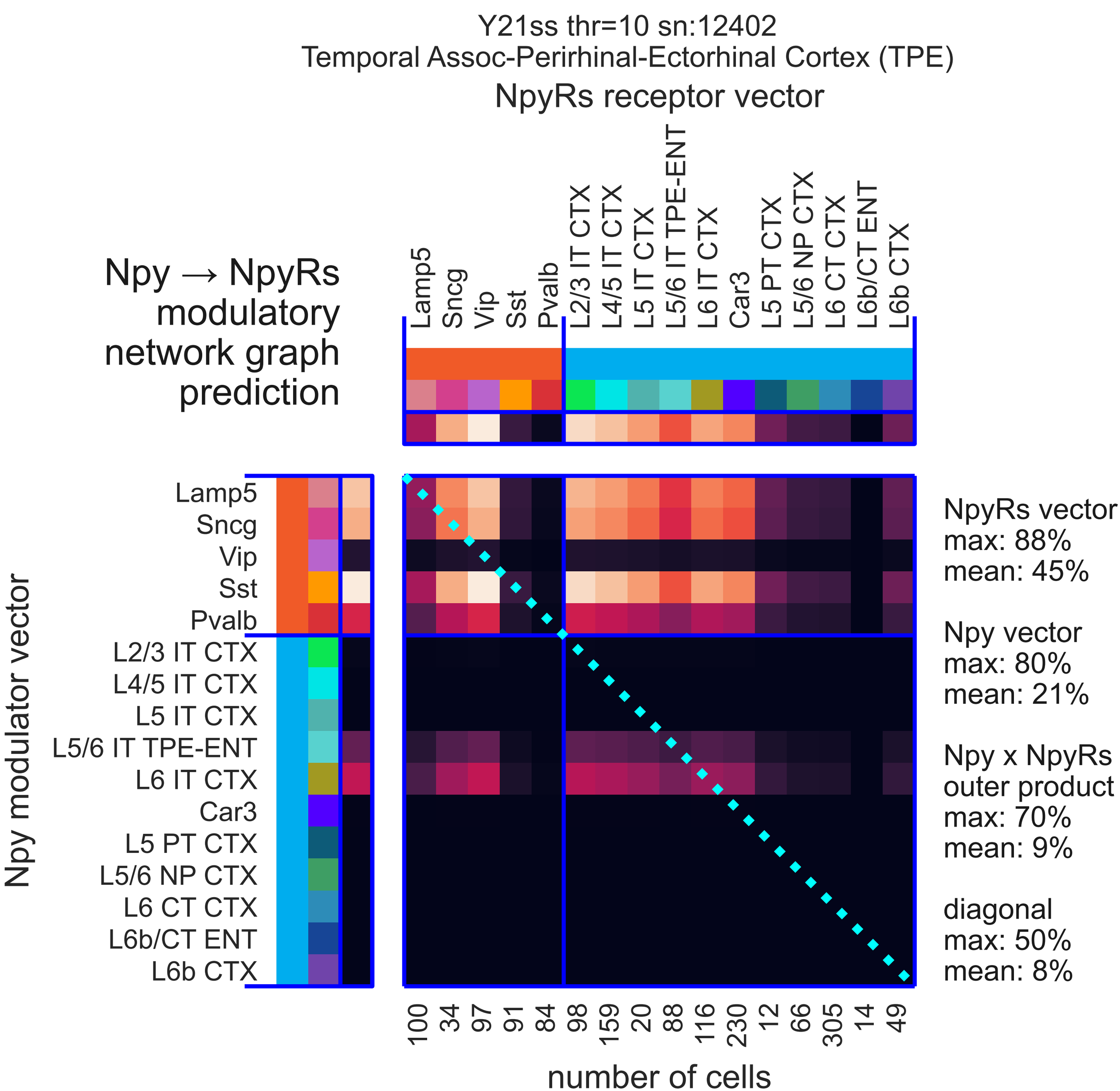

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Npy modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
NpyRs vector
max: 96%
mean: 54%
Npy vector
max: 86%
mean: 25%
Npy x NpyRs
outer product
max: 82%
mean: 13%
diagonal
max: 52%
mean: 10%

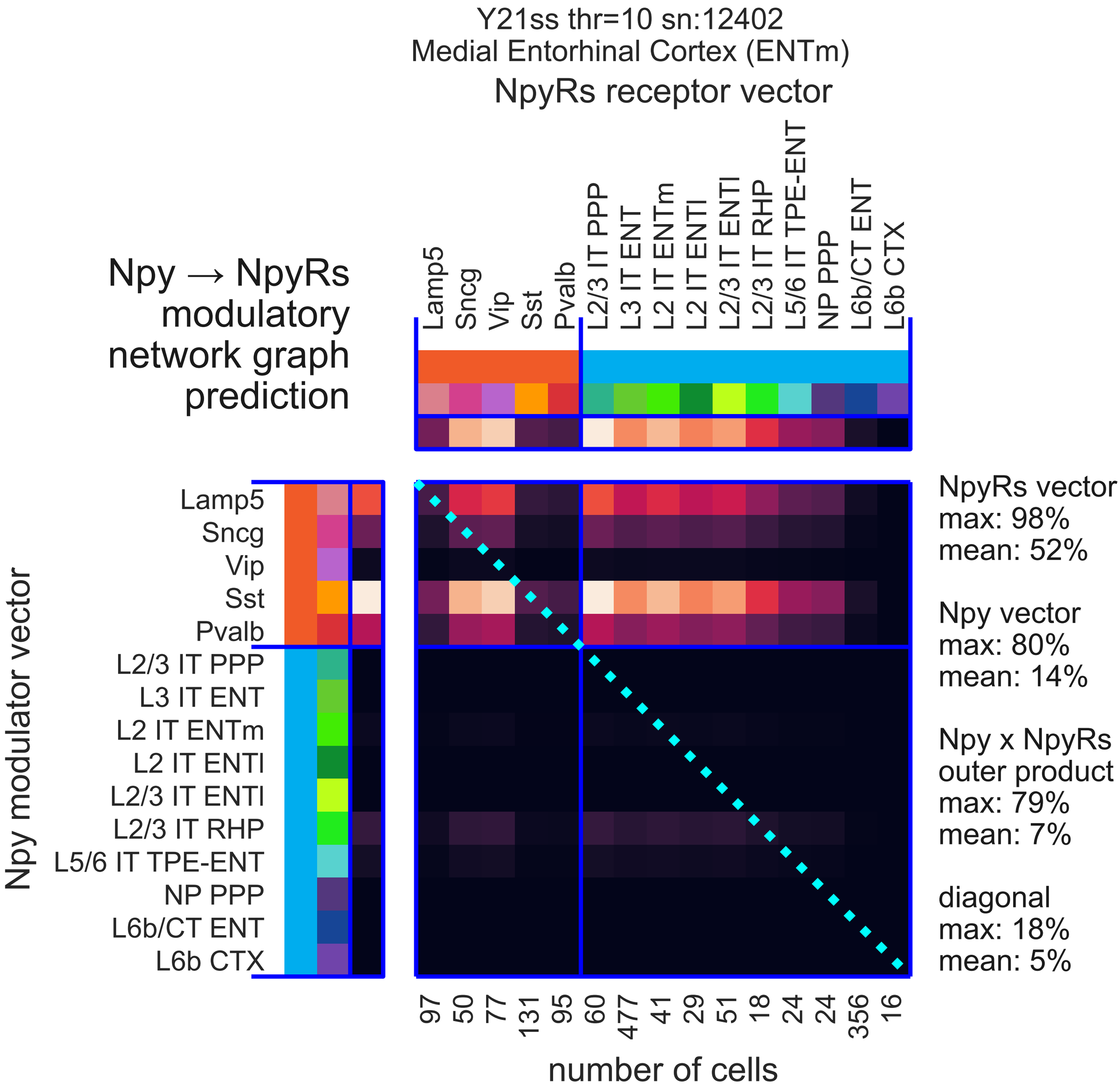
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

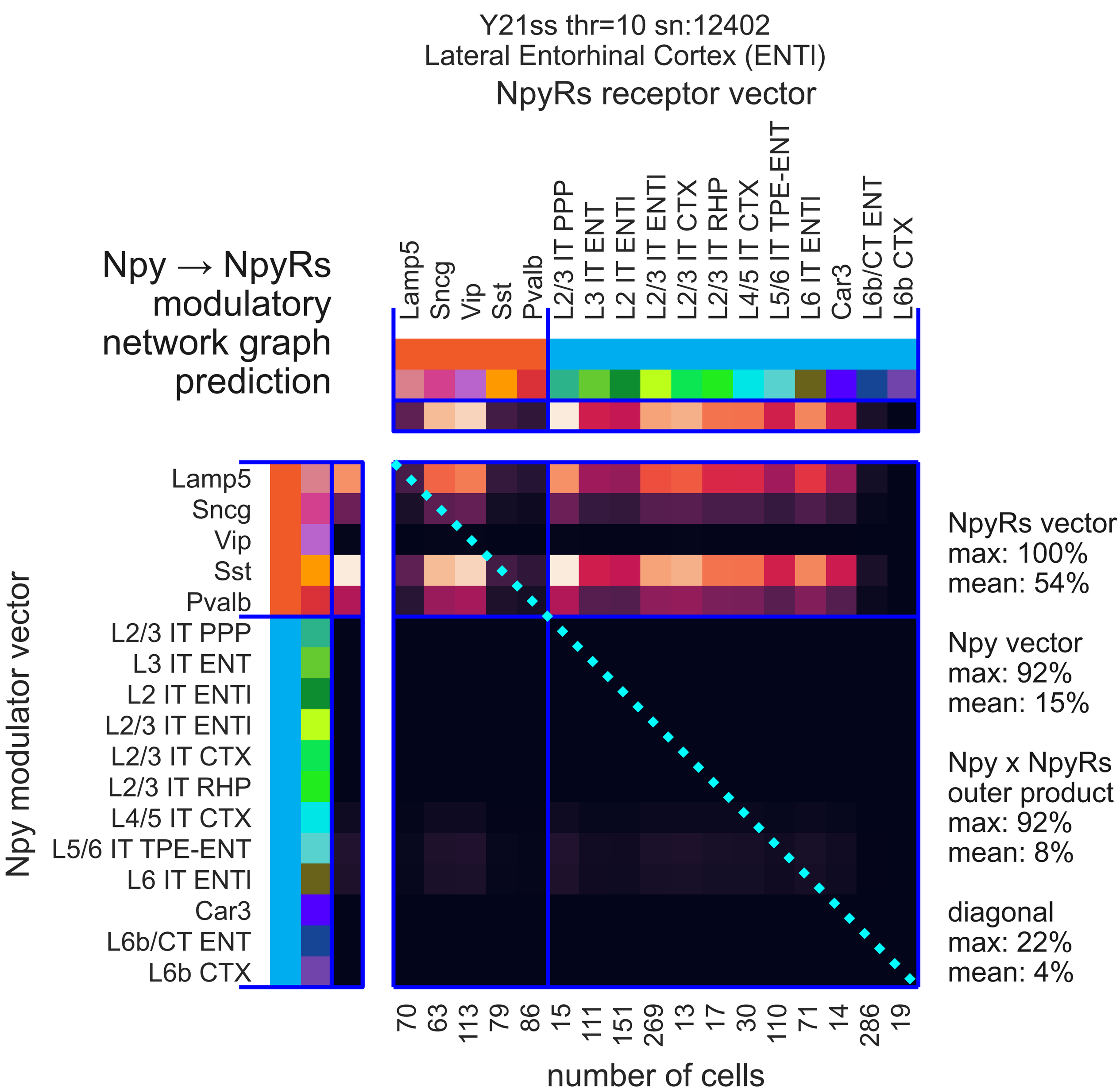



Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Npy modulator vector
51
44
248
10
164
164
142
378
677
545
354
55
317
1,512
417
number of cells
NpyRs vector
max: 93%
mean: 48%
Npy vector
max: 100%
mean: 32%
Npy x NpyRs
outer product
max: 93%
mean: 15%
diagonal
max: 57%
mean: 12%

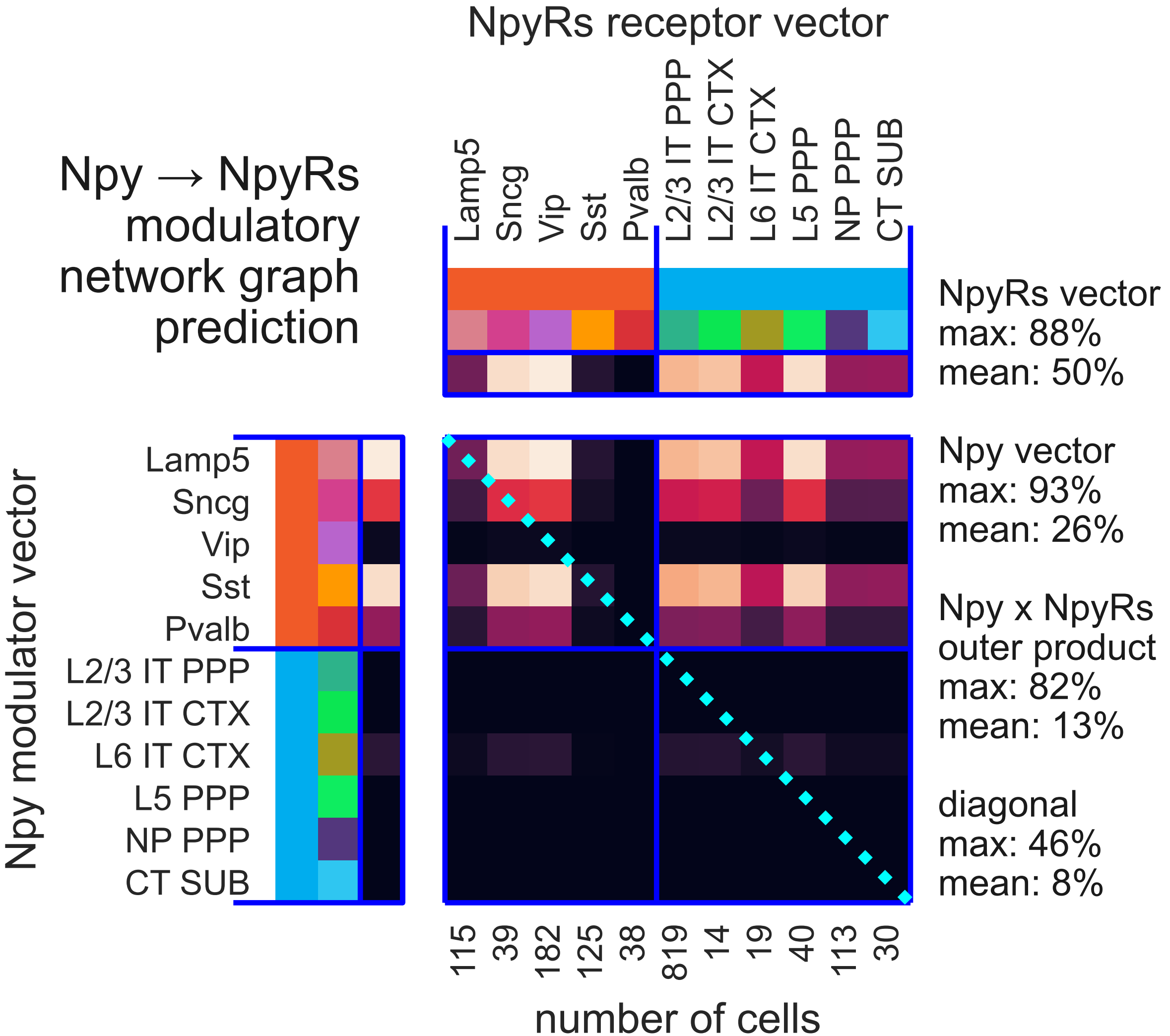

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Npy modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
NpyRs vector
max: 97%
mean: 51%
Npy vector
max: 93%
mean: 22%
Npy x NpyRs
outer product
max: 90%
mean: 11%
diagonal
max: 72%
mean: 10%

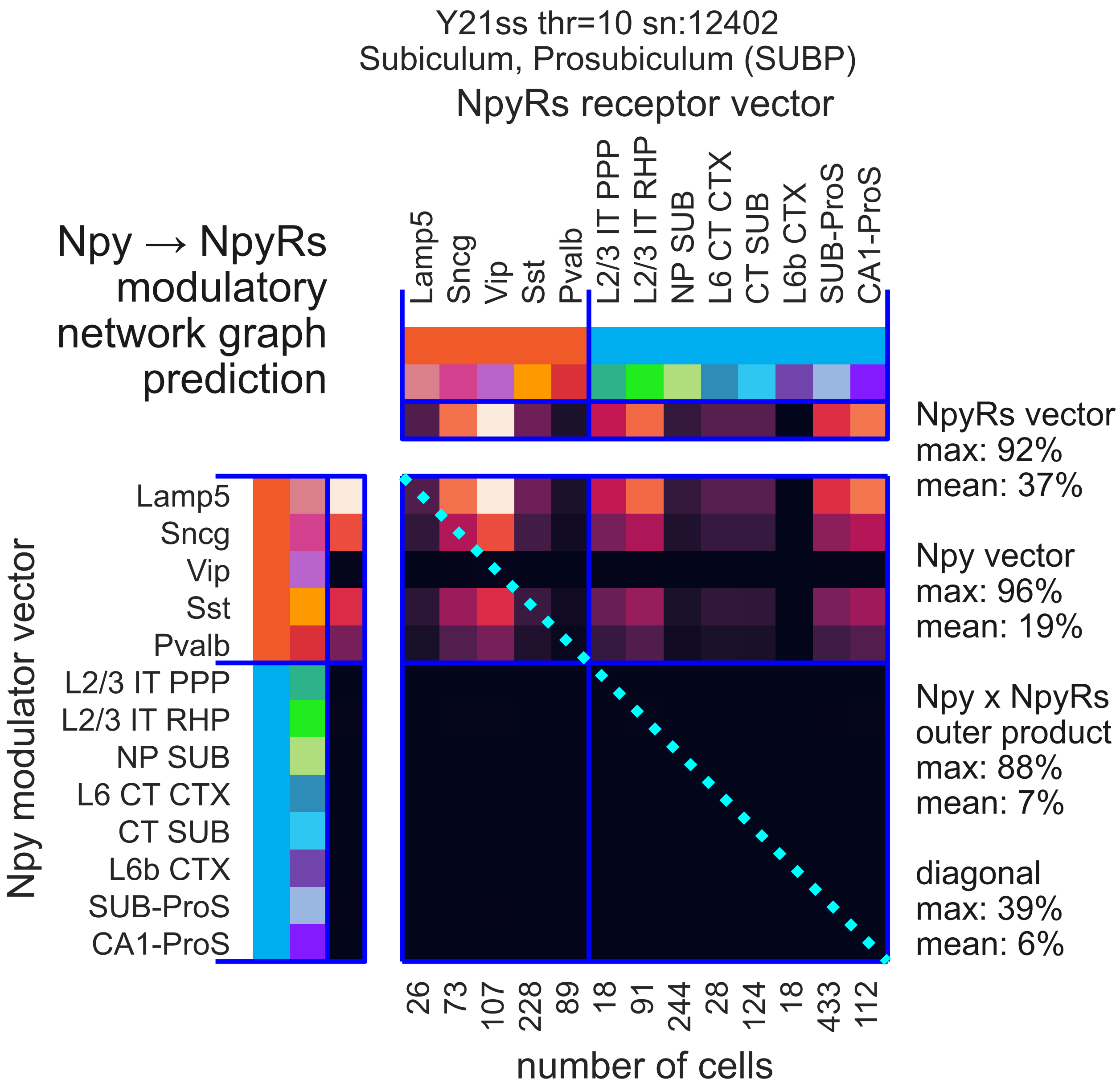

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b/CT ENT
L6b CTX
Npy modulator vector
100
34
97
91
84
98
159
20
88
116
230
12
66
305
14
49
number of cells
NpyRs vector
max: 88%
mean: 45%
Npy vector
max: 80%
mean: 21%
Npy x NpyRs
outer product
max: 70%
mean: 9%
diagonal
max: 50%
mean: 8%


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Npy modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
NpyRs vector
max: 98%
mean: 52%
Npy vector
max: 80%
mean: 14%
Npy x NpyRs
outer product
max: 79%
mean: 7%
diagonal
max: 18%
mean: 5%

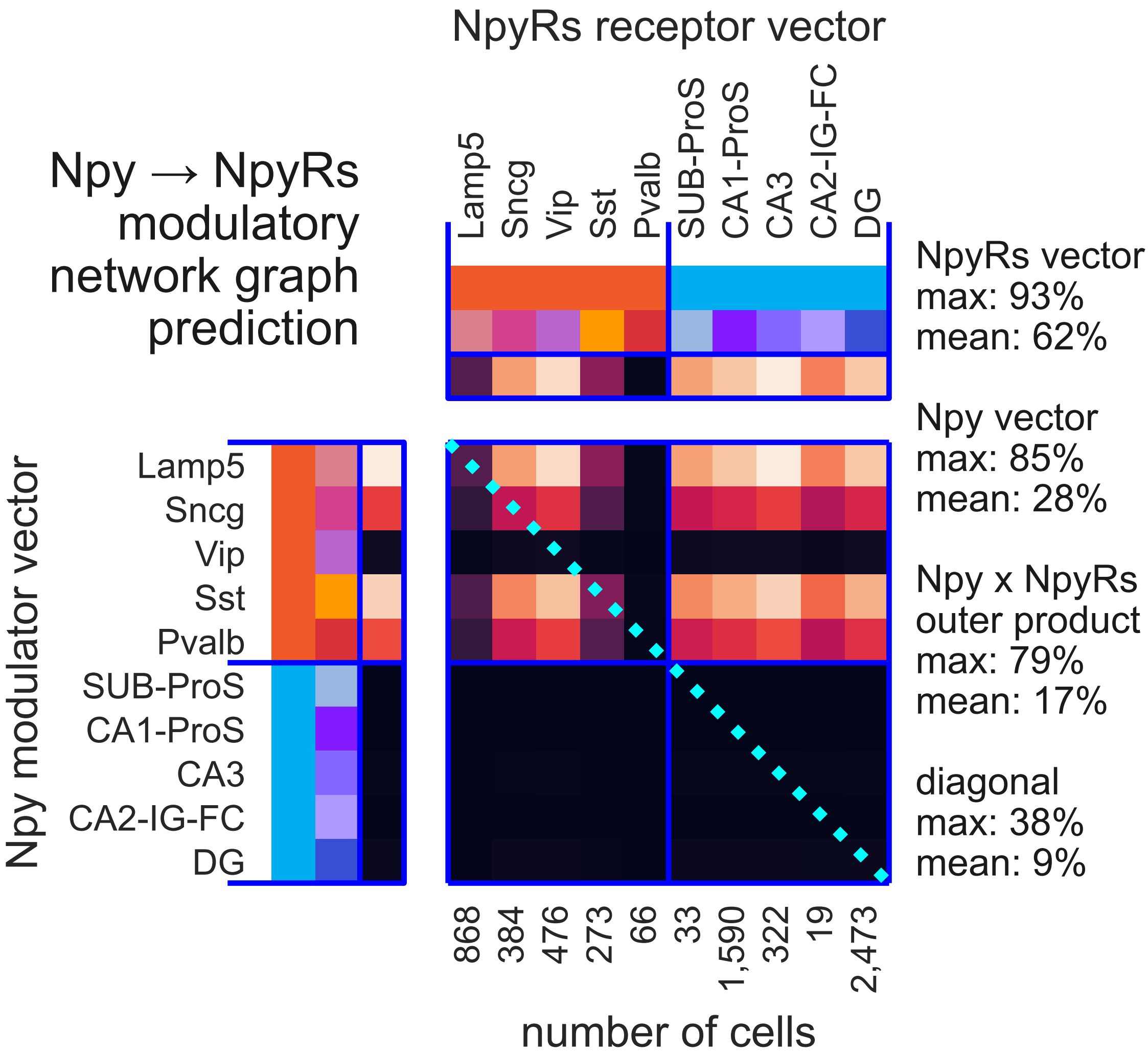

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
NpyRs receptor vector
Npy → NpyRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Npy modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
NpyRs vector
max: 100%
mean: 54%
Npy vector
max: 92%
mean: 15%
Npy x NpyRs
outer product
max: 92%
mean: 8%
diagonal
max: 22%
mean: 4%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

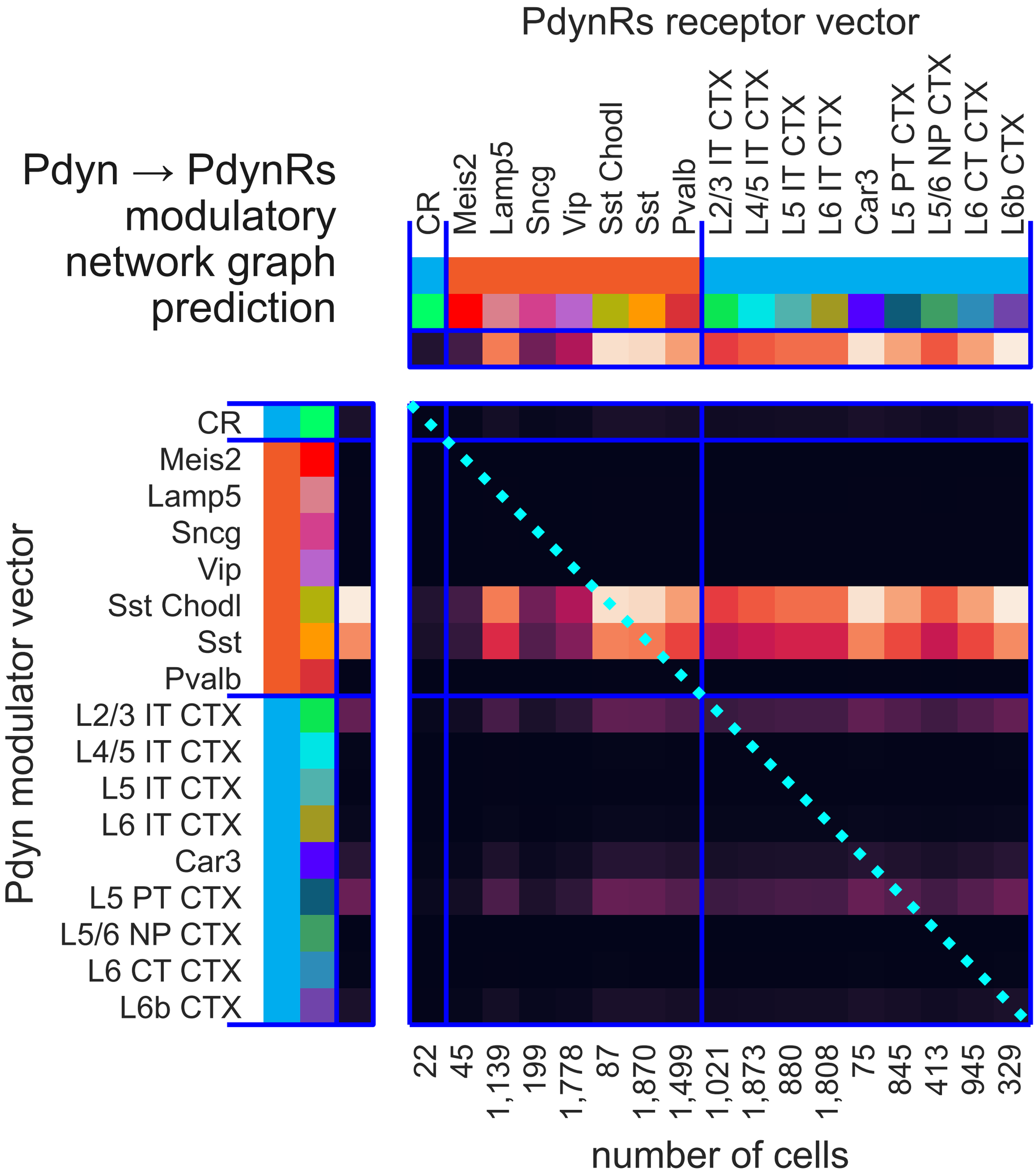



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)
NpyRs receptor vector
Npy → NpyRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT RHP
NP SUB
L6 CT CTX
CT SUB
L6b CTX
SUB-ProS
CA1-ProS
NpyRs vector
max: 92%
mean: 37%
Npy vector
max: 96%
mean: 19%
Npy x NpyRs
outer product
max: 88%
mean: 7%
diagonal
max: 39%
mean: 6%
Npy modulator vector
26
73
107
228
89
18
91
244
28
124
18
433
112
number of cells

Y21ss thr=10 sn:12402
Hippocampus (HIP)



Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



PdynRs vector
max: 100%
mean: 66%

Pdyn vector
max: 64%
mean: 10%

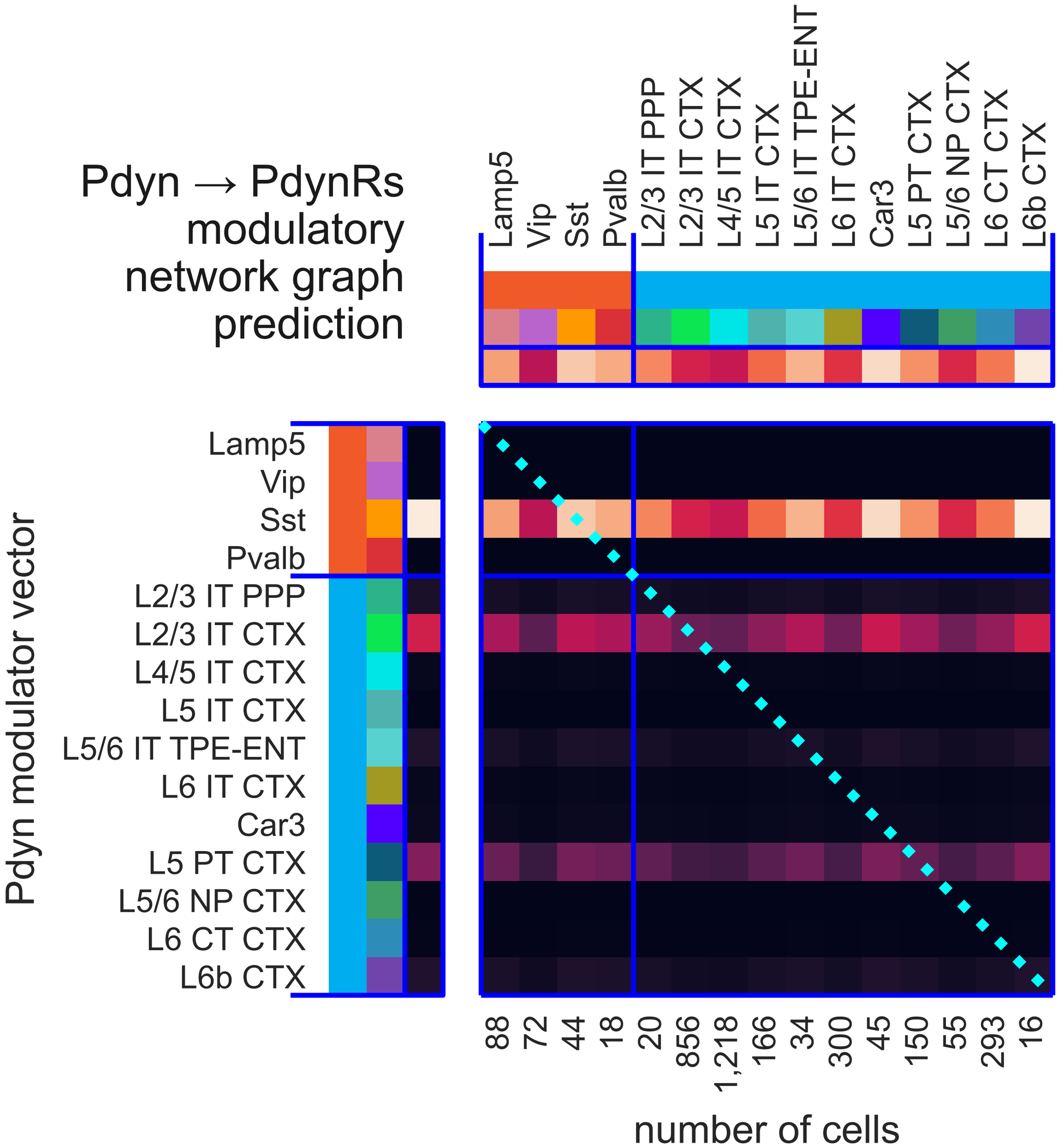
Pdyn x PdynRs
outer product
max: 64%
mean: 7%

diagonal
max: 62%
mean: 9%

Y21ss thr=10 sn:12402
Visual Cortex (VIS)

PdynRs receptor vector

Pdyn → PdynRs
modulatory
network graph
prediction



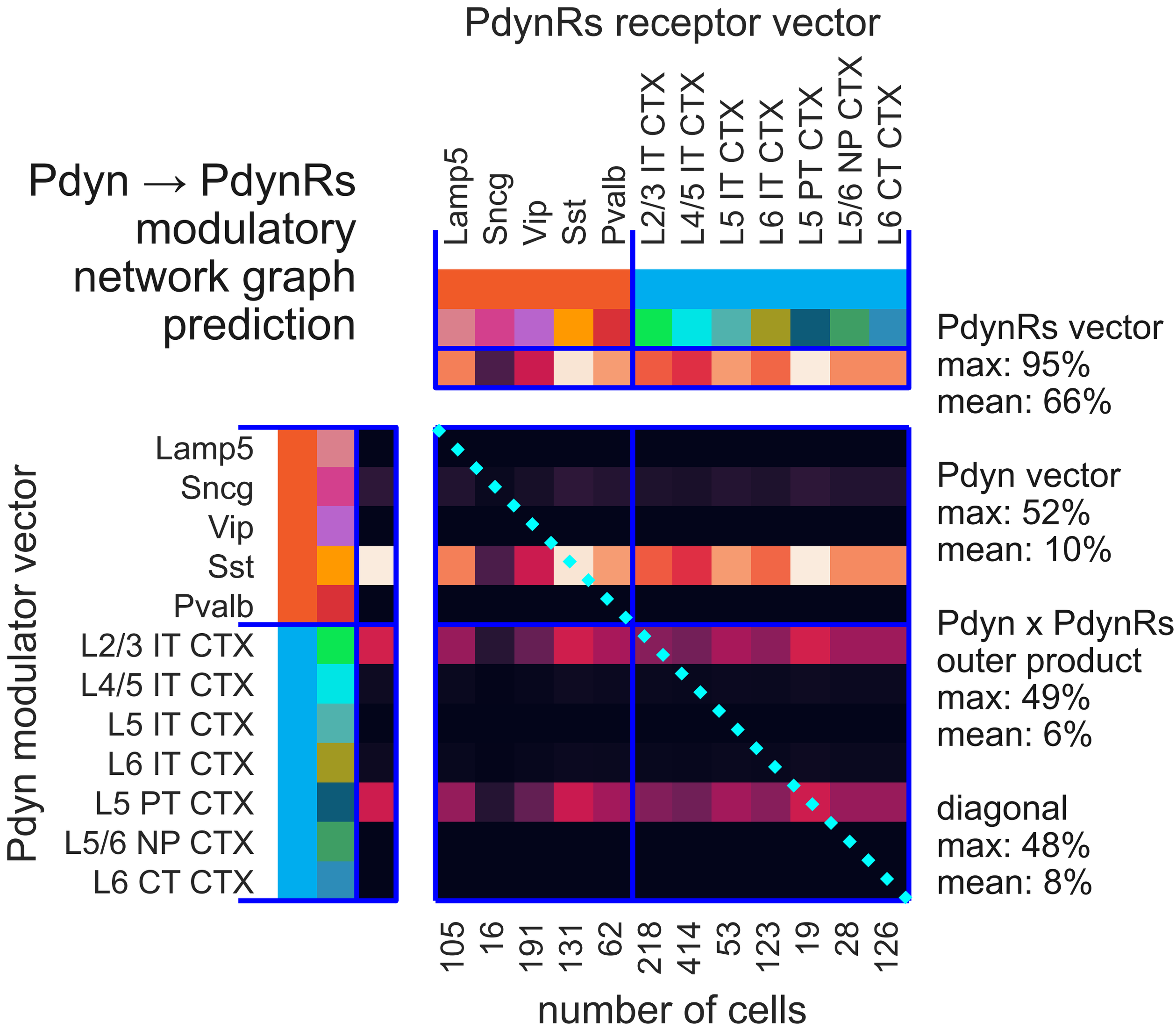
PdynRs vector
max: 100%
mean: 72%

Pdyn vector
max: 73%
mean: 10%

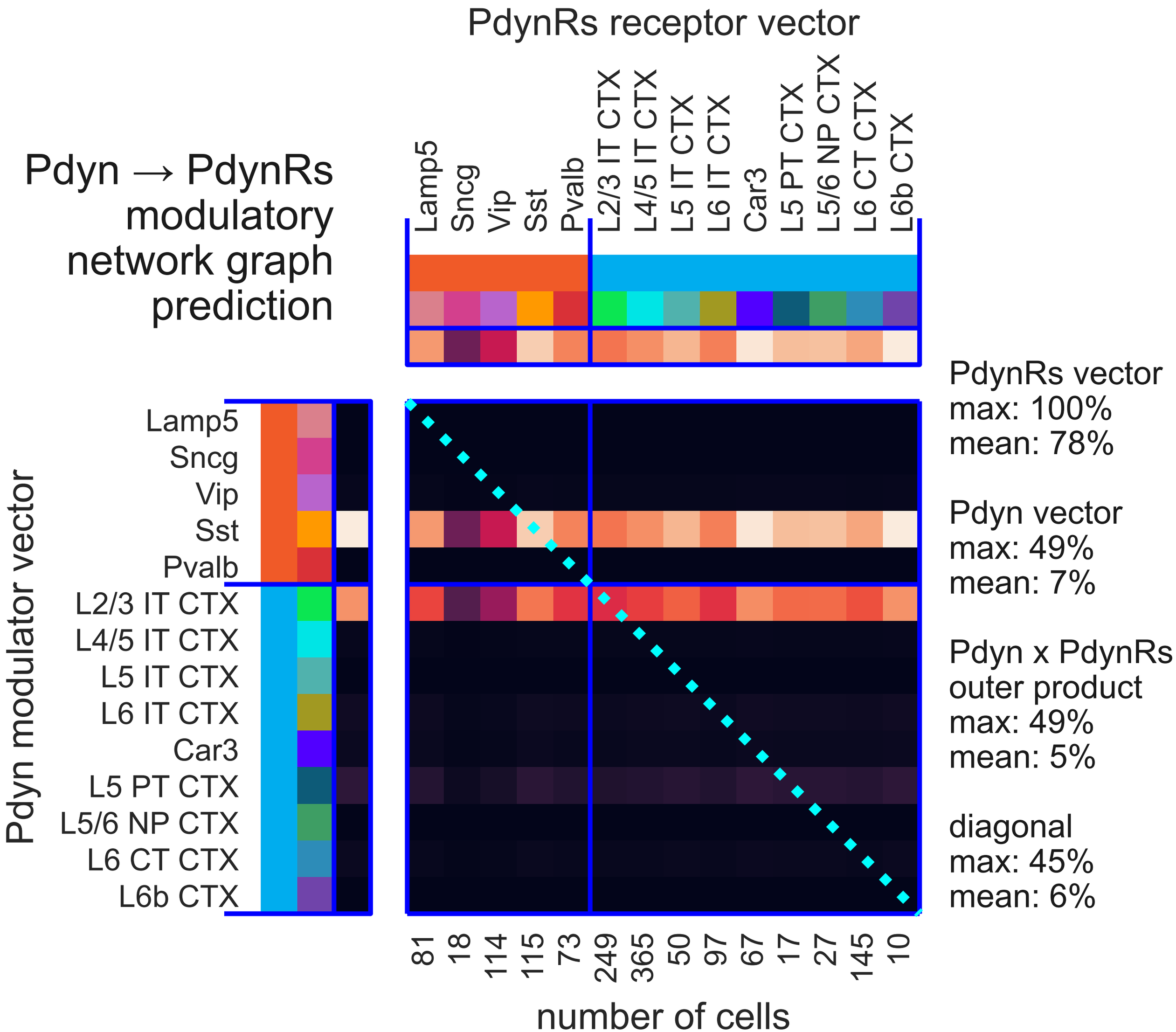
Pdyn x PdynRs
outer product
max: 73%
mean: 8%

diagonal
max: 66%
mean: 8%

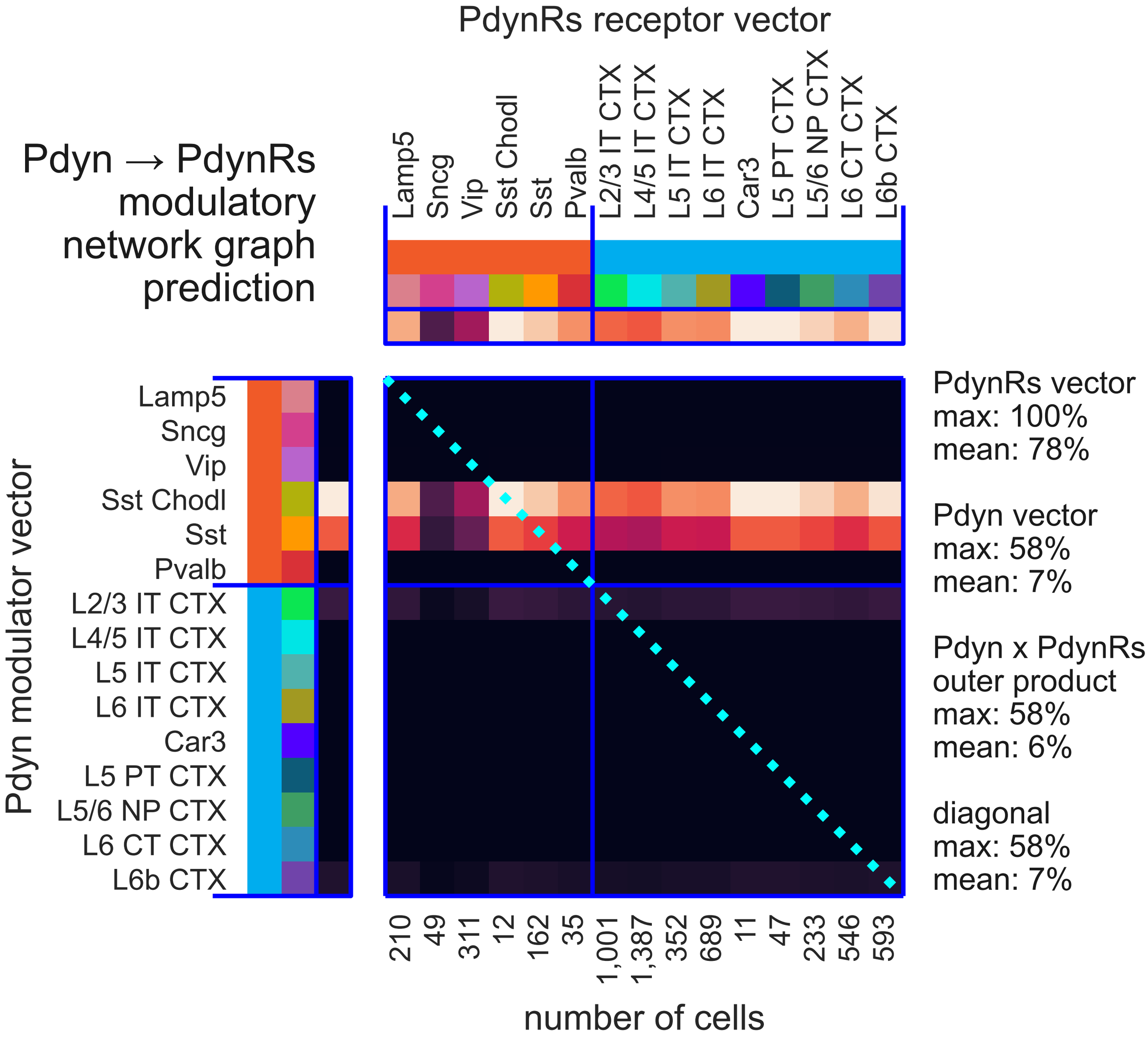
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



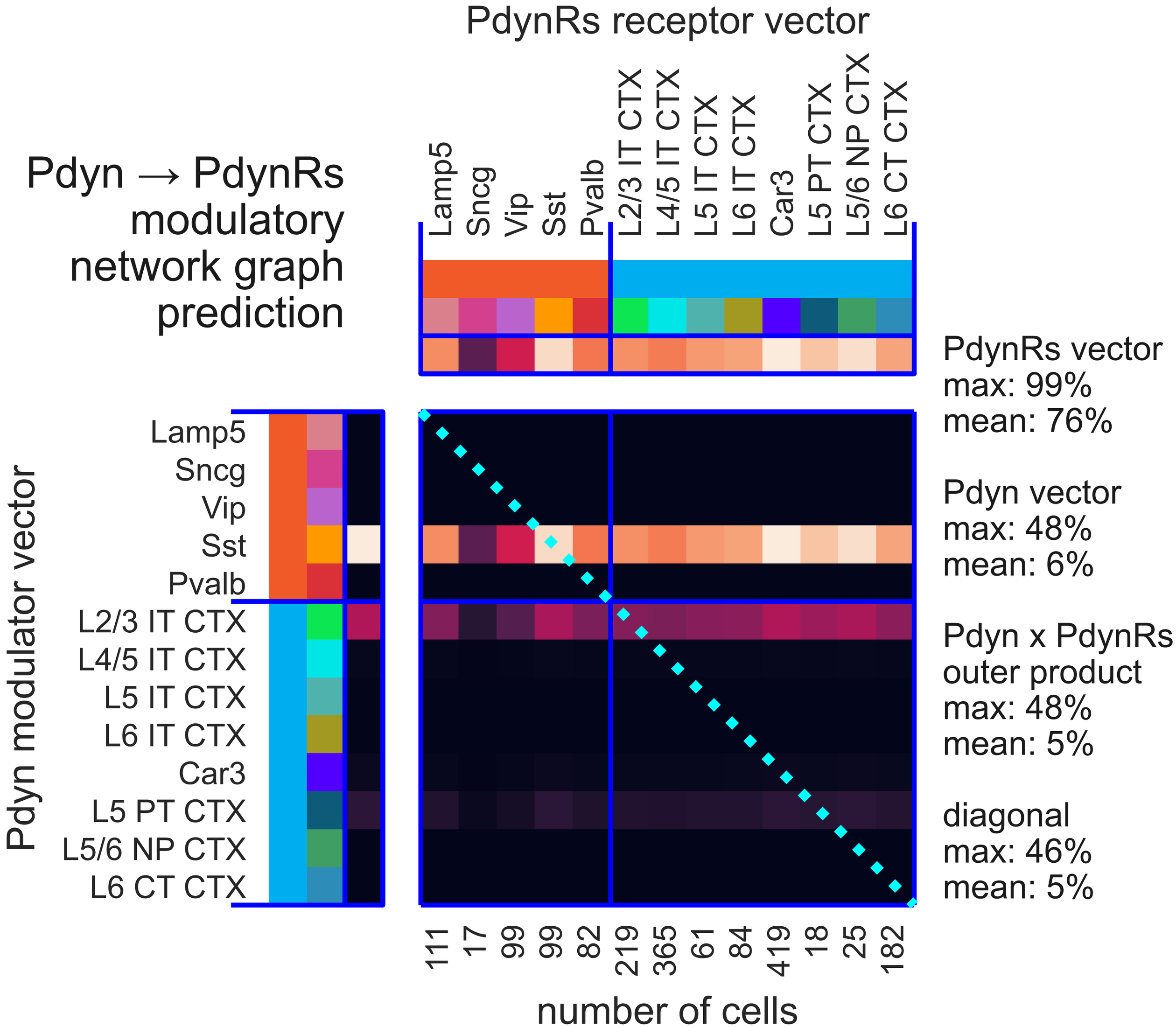
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

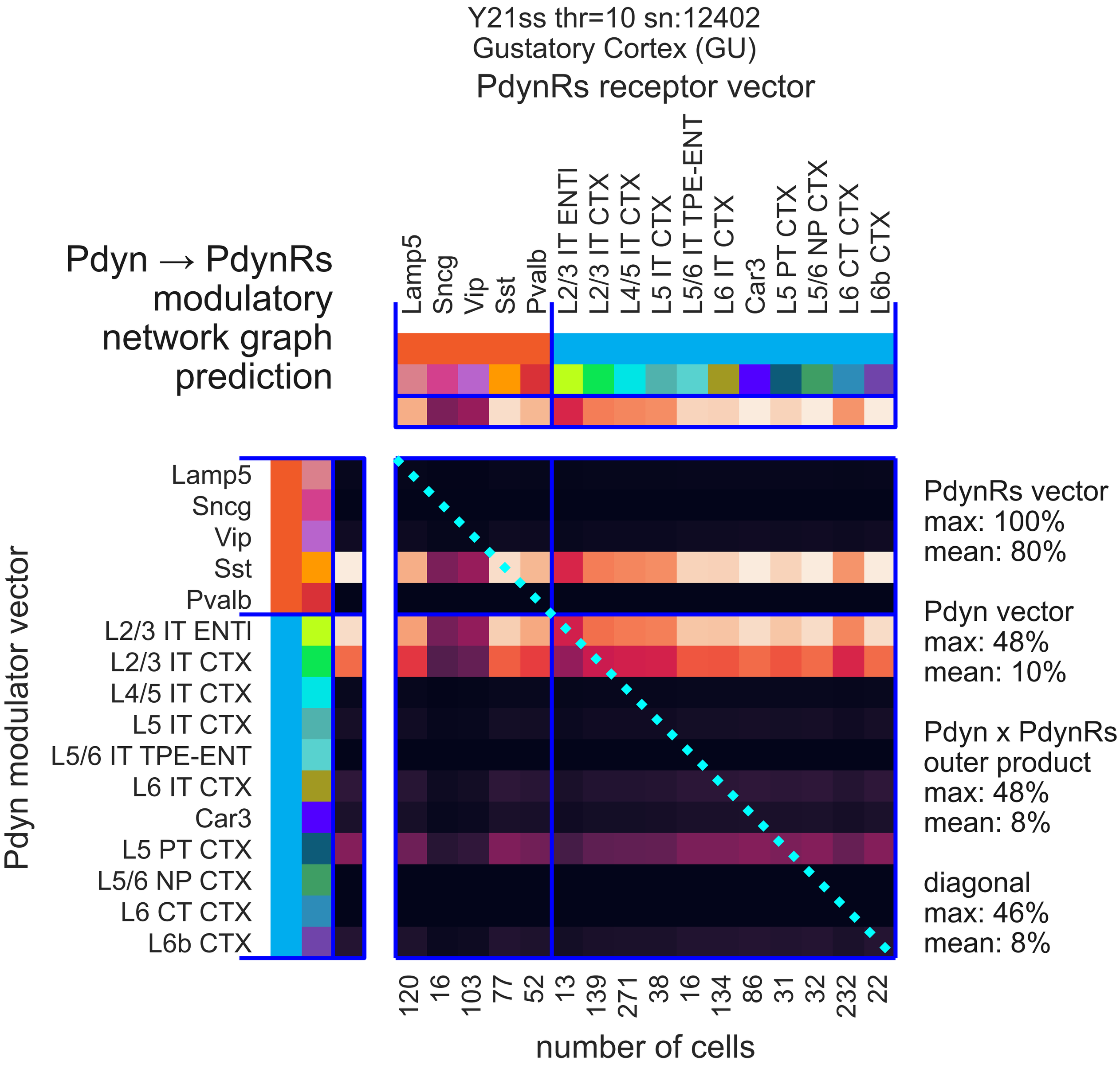


Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)

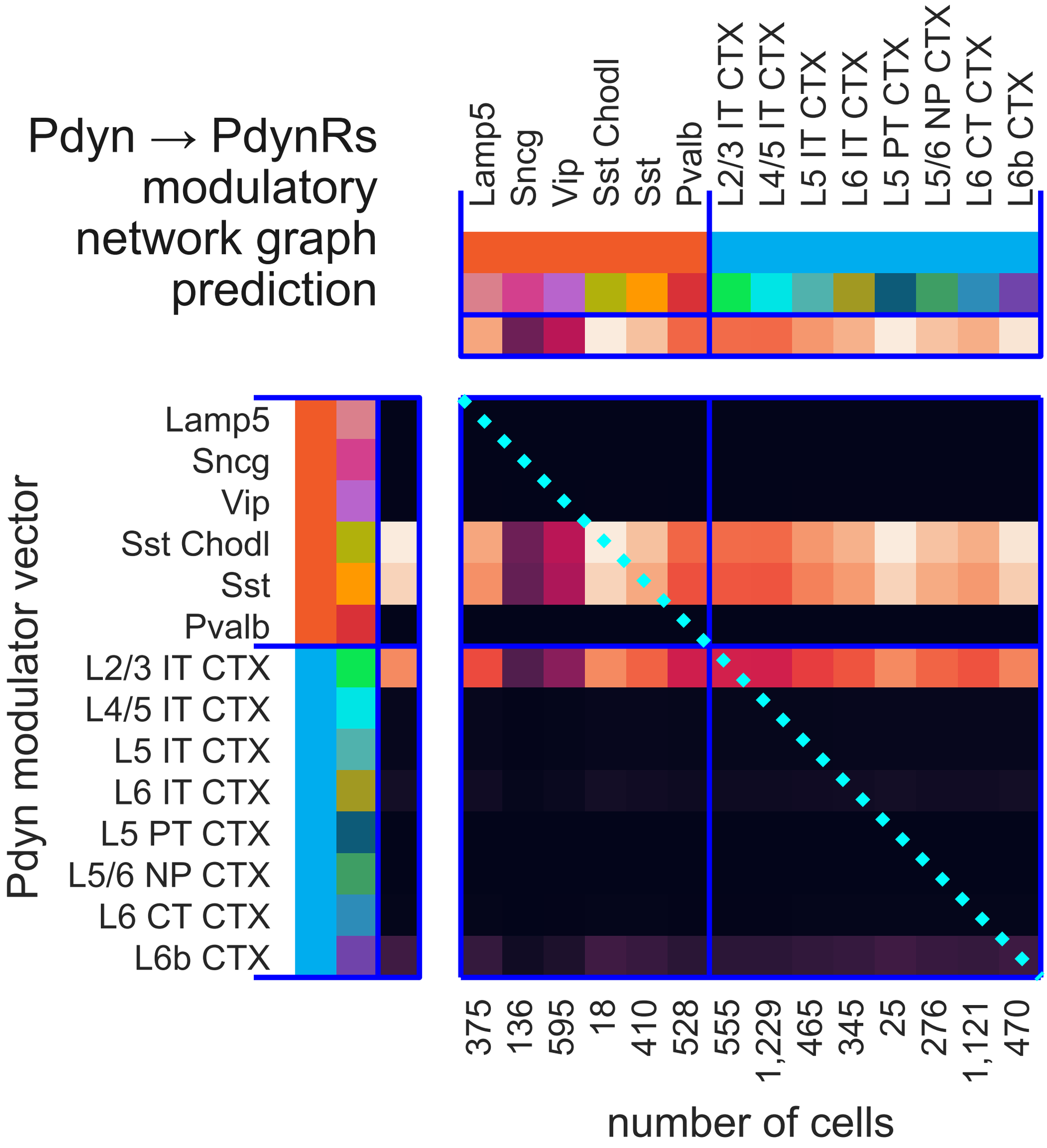



Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
PdynRs receptor vector
Pdyn → PdynRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Pdyn modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
PdynRs vector
max: 100%
mean: 80%
Pdyn vector
max: 48%
mean: 10%
Pdyn x PdynRs
outer product
max: 48%
mean: 8%
diagonal
max: 46%
mean: 8%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)

PdynRs receptor vector

Pdyn → PdynRs
modulatory
network graph
prediction

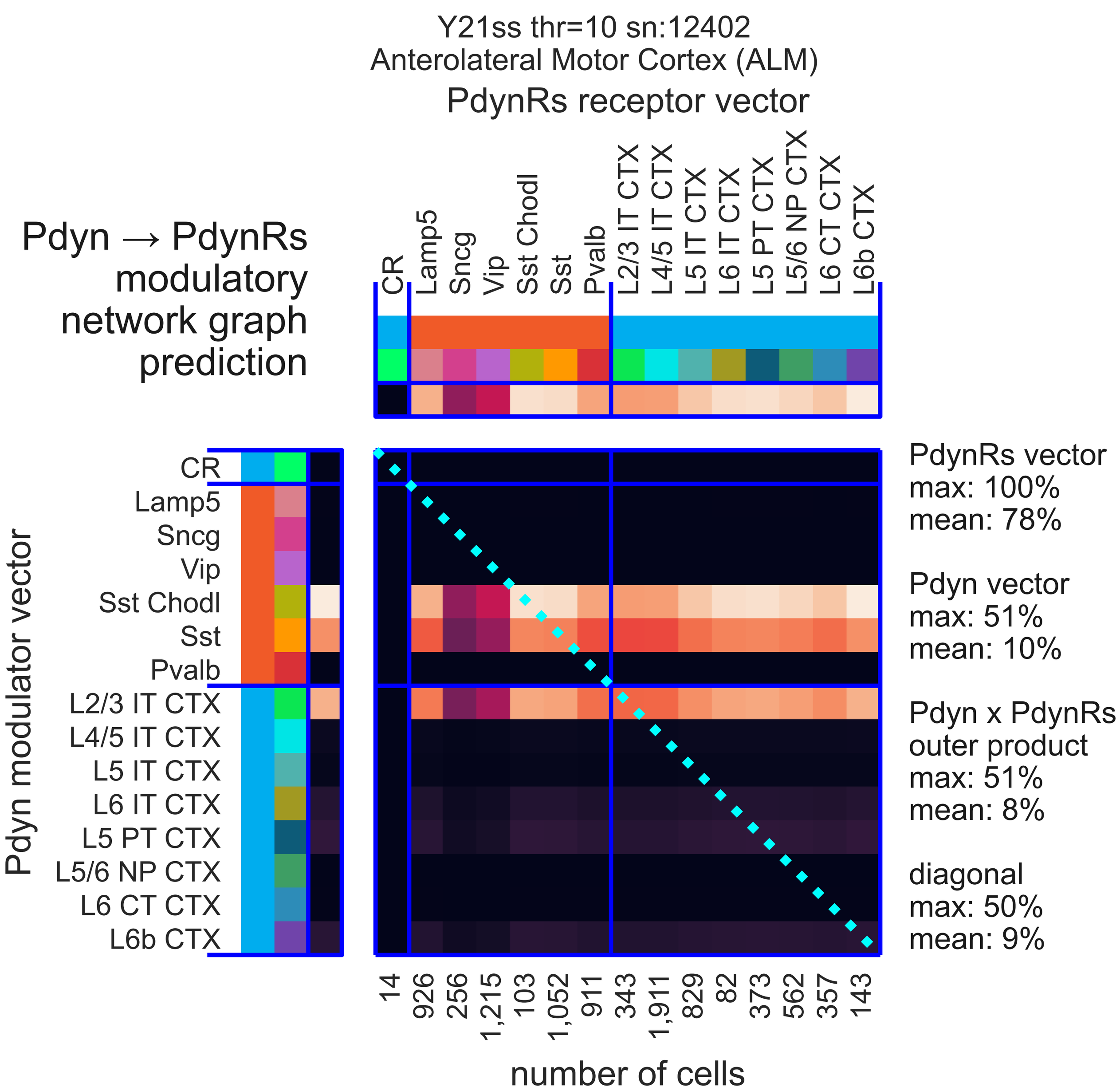


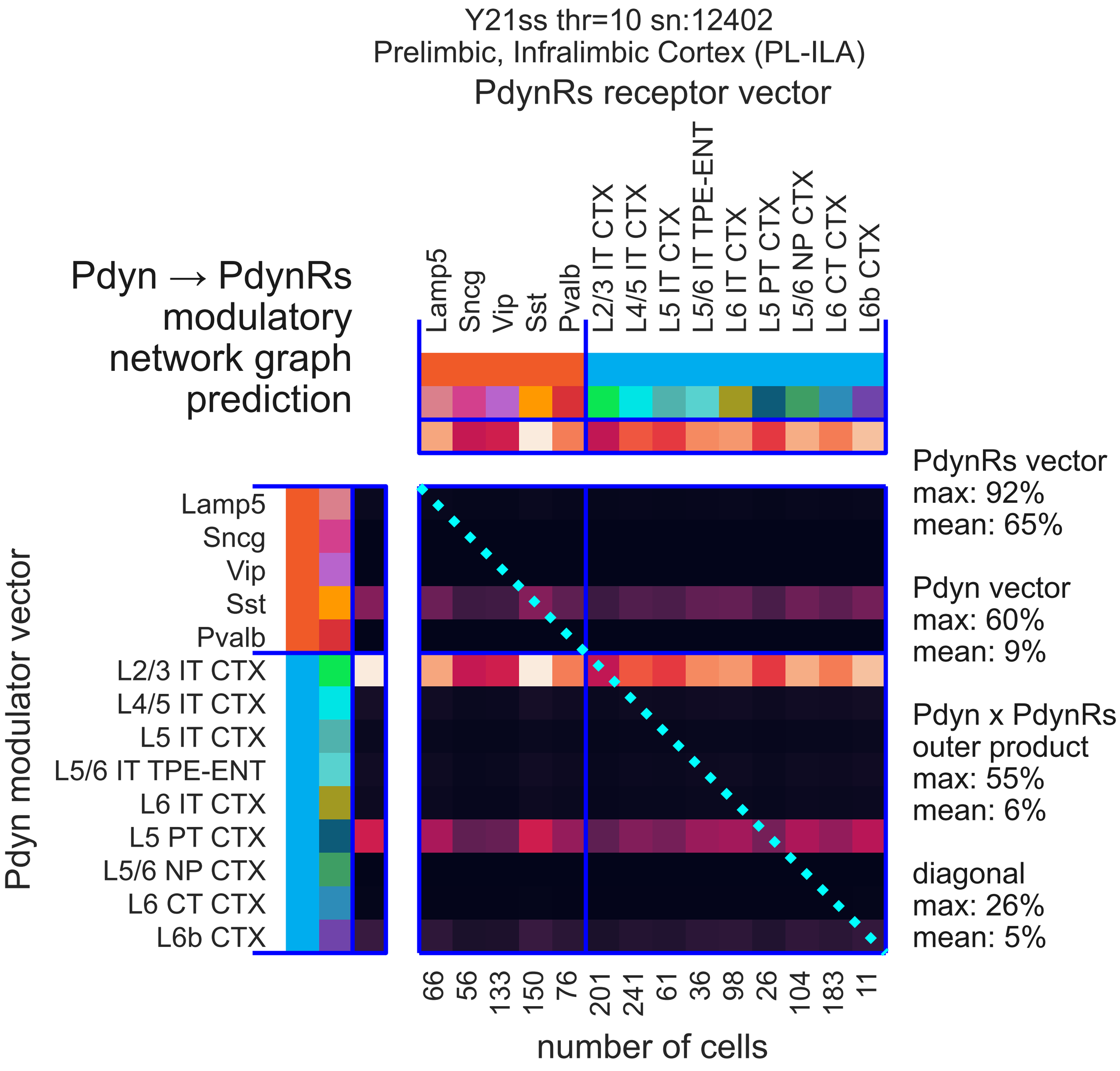
PdynRs vector
max: 100%
mean: 78%

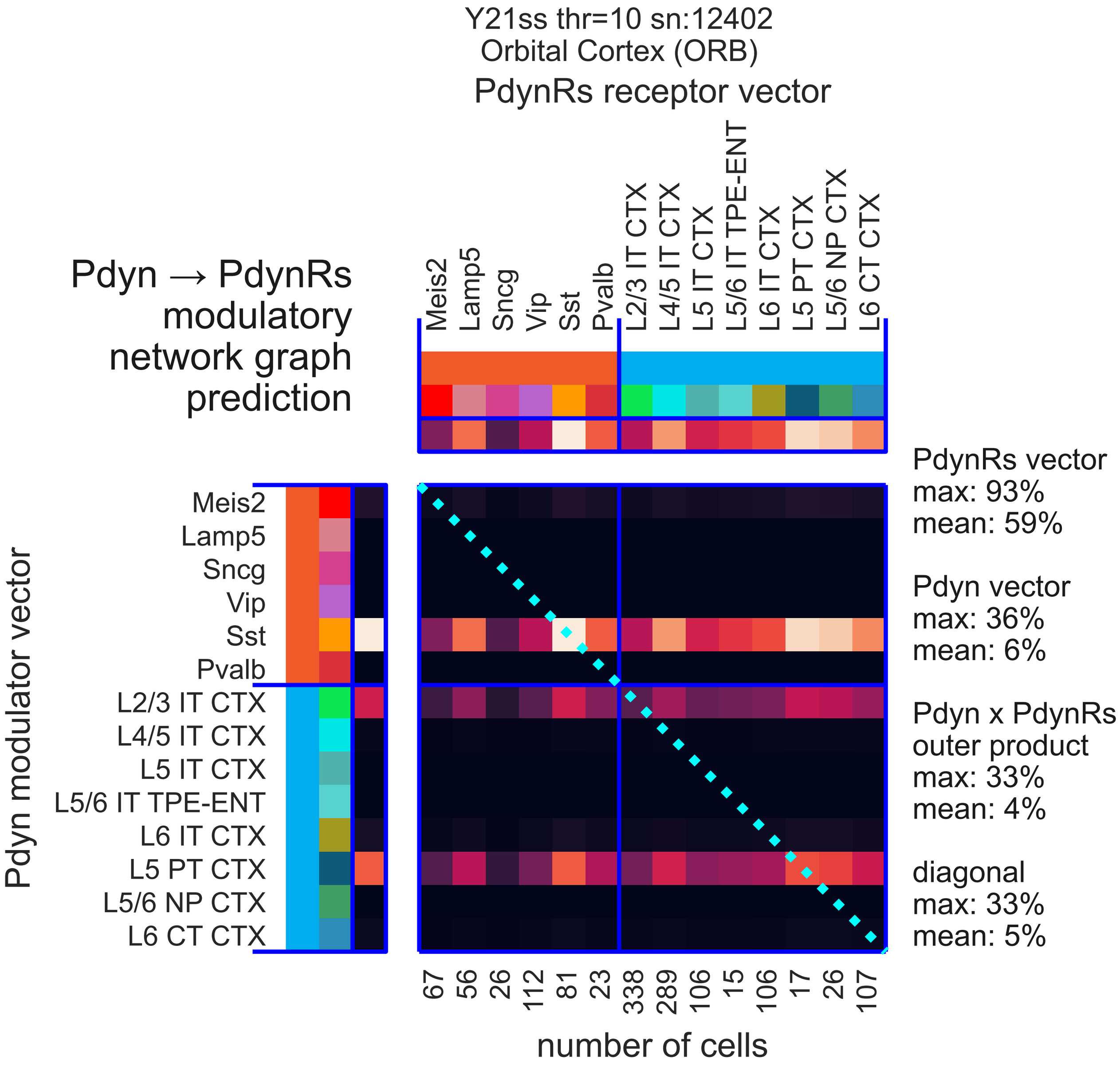
Pdyn vector
max: 33%
mean: 7%

Pdyn x PdynRs
outer product
max: 33%
mean: 5%

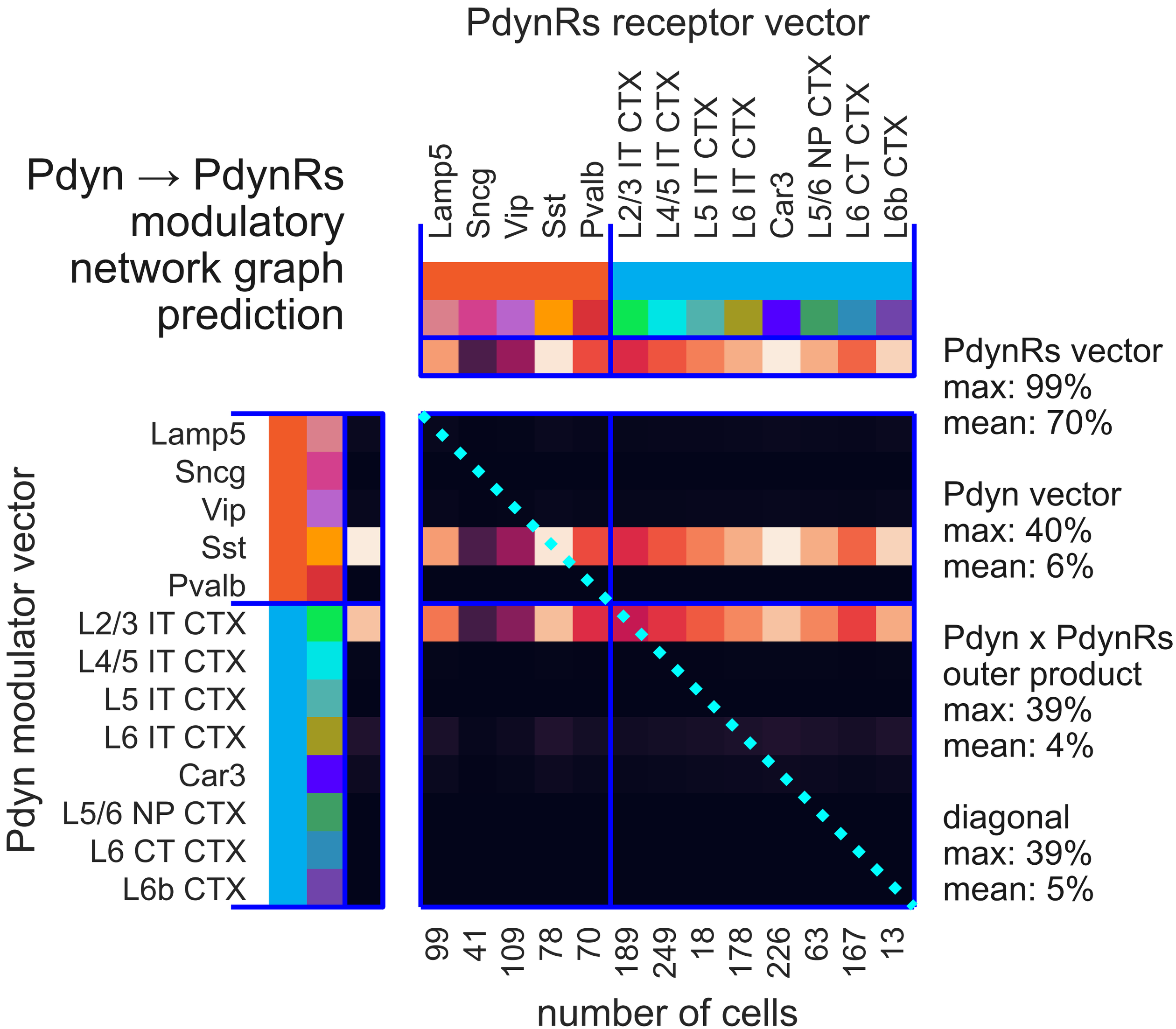
diagonal
max: 33%
mean: 6%

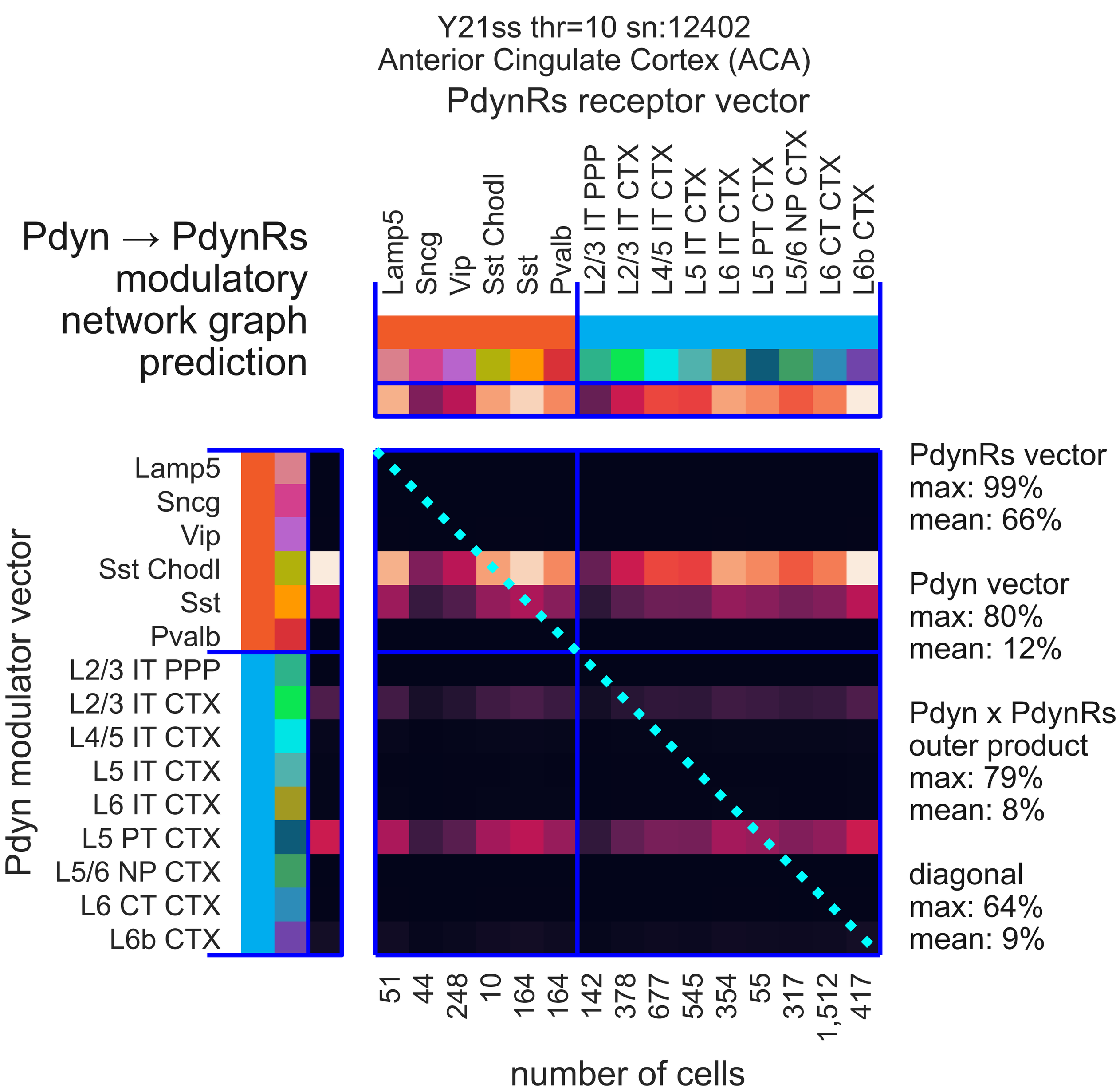

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)
PdynRs receptor vector
Pdyn → PdynRs
modulatory
network graph
prediction
CR
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Pdyn modulator vector
PdynRs vector
max: 100%
mean: 78%
Pdyn vector
max: 51%
mean: 10%
Pdyn x PdynRs
outer product
max: 51%
mean: 8%
diagonal
max: 50%
mean: 9%
14
926
256
1,215
103
1,052
911
343
1,911
829
82
373
562
357
143
number of cells

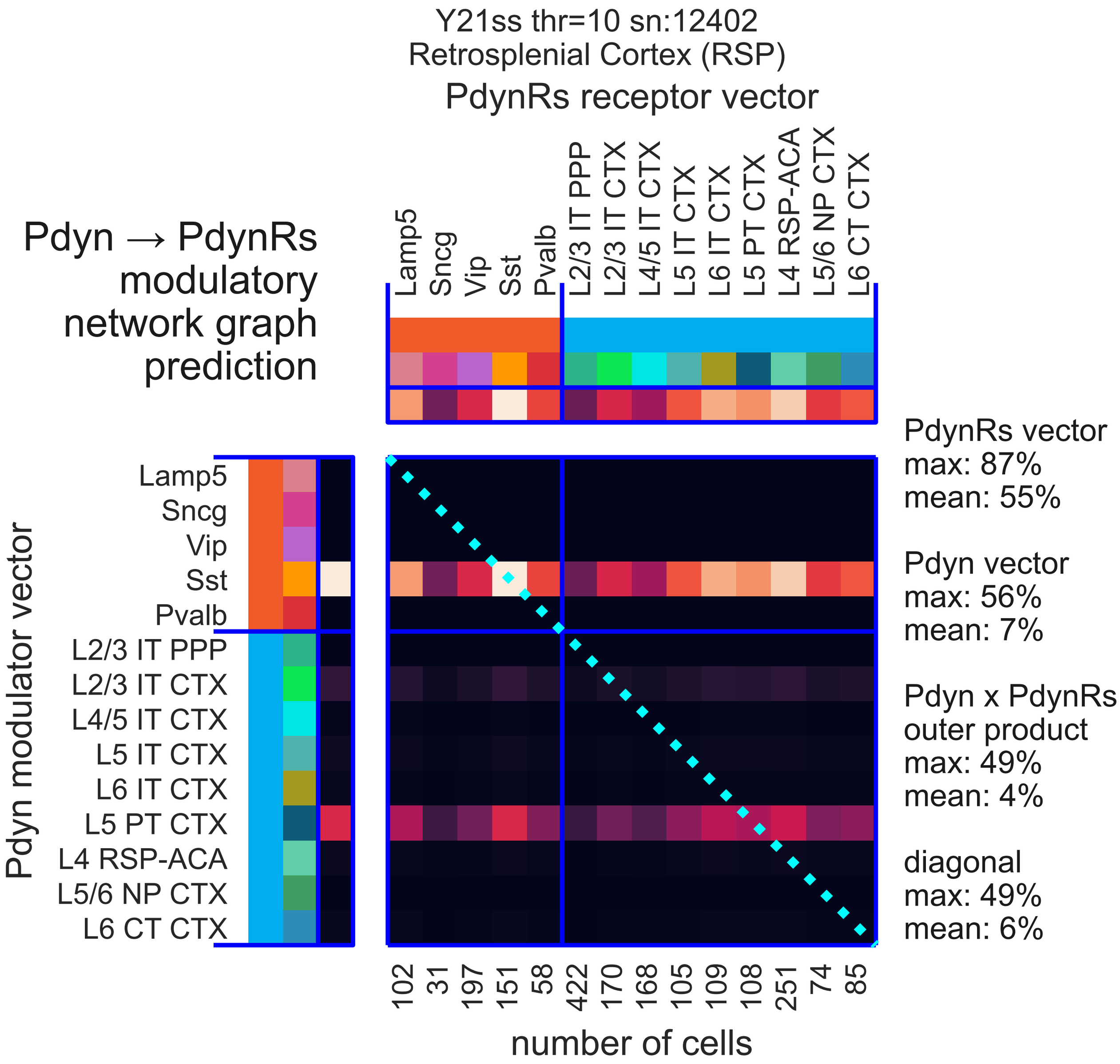

Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)
PdynRs receptor vector
Pdyn → PdynRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Pdyn modulator vector
PdynRs vector
max: 92%
mean: 65%
Pdyn vector
max: 60%
mean: 9%
Pdyn x PdynRs
outer product
max: 55%
mean: 6%
diagonal
max: 26%
mean: 5%
66
56
133
150
76
201
241
61
36
98
26
104
183
11
number of cells


Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
PdynRs receptor vector
Pdyn → PdynRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Pdyn modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
PdynRs vector
max: 93%
mean: 59%
Pdyn vector
max: 36%
mean: 6%
Pdyn x PdynRs
outer product
max: 33%
mean: 4%
diagonal
max: 33%
mean: 5%

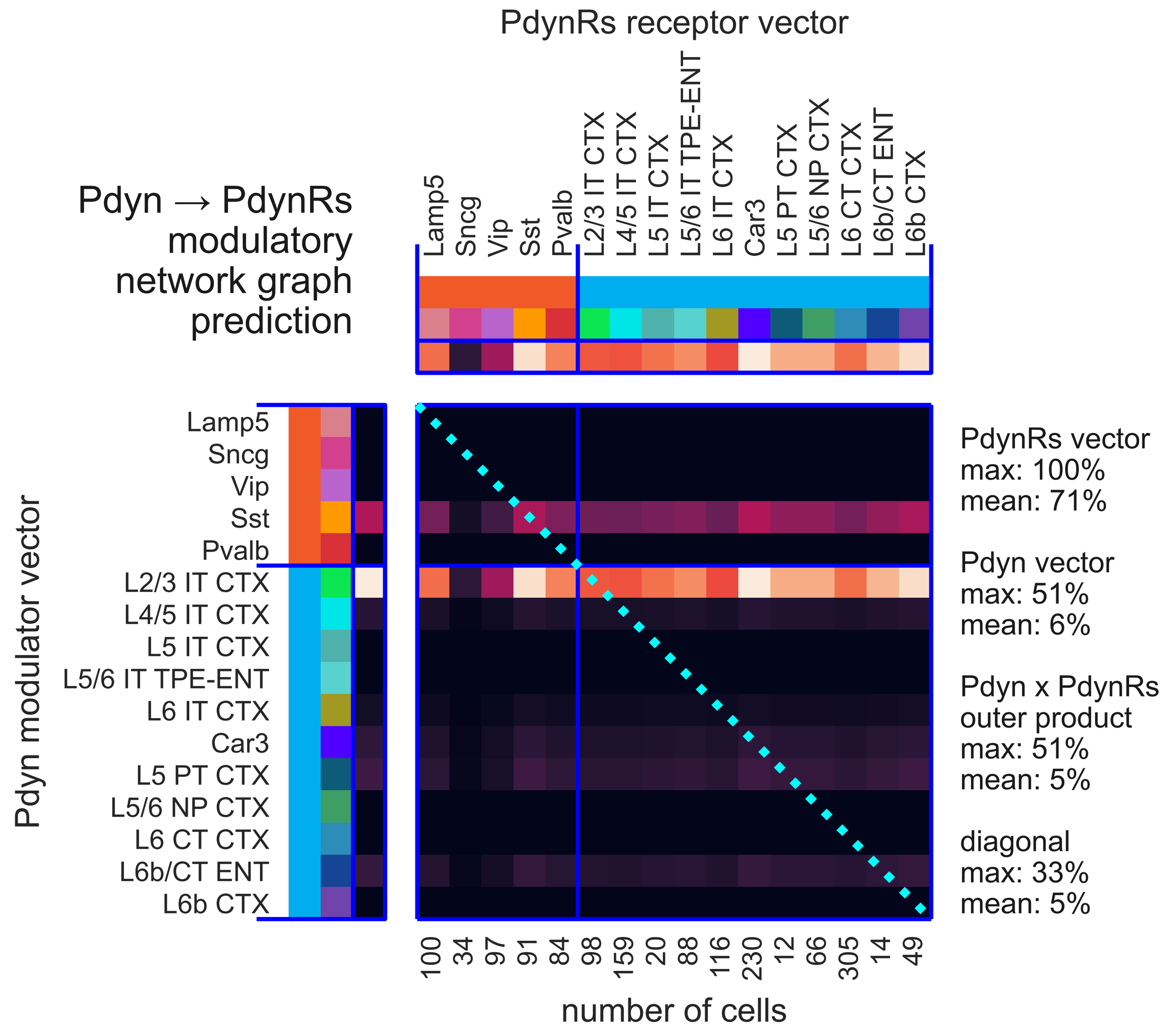
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

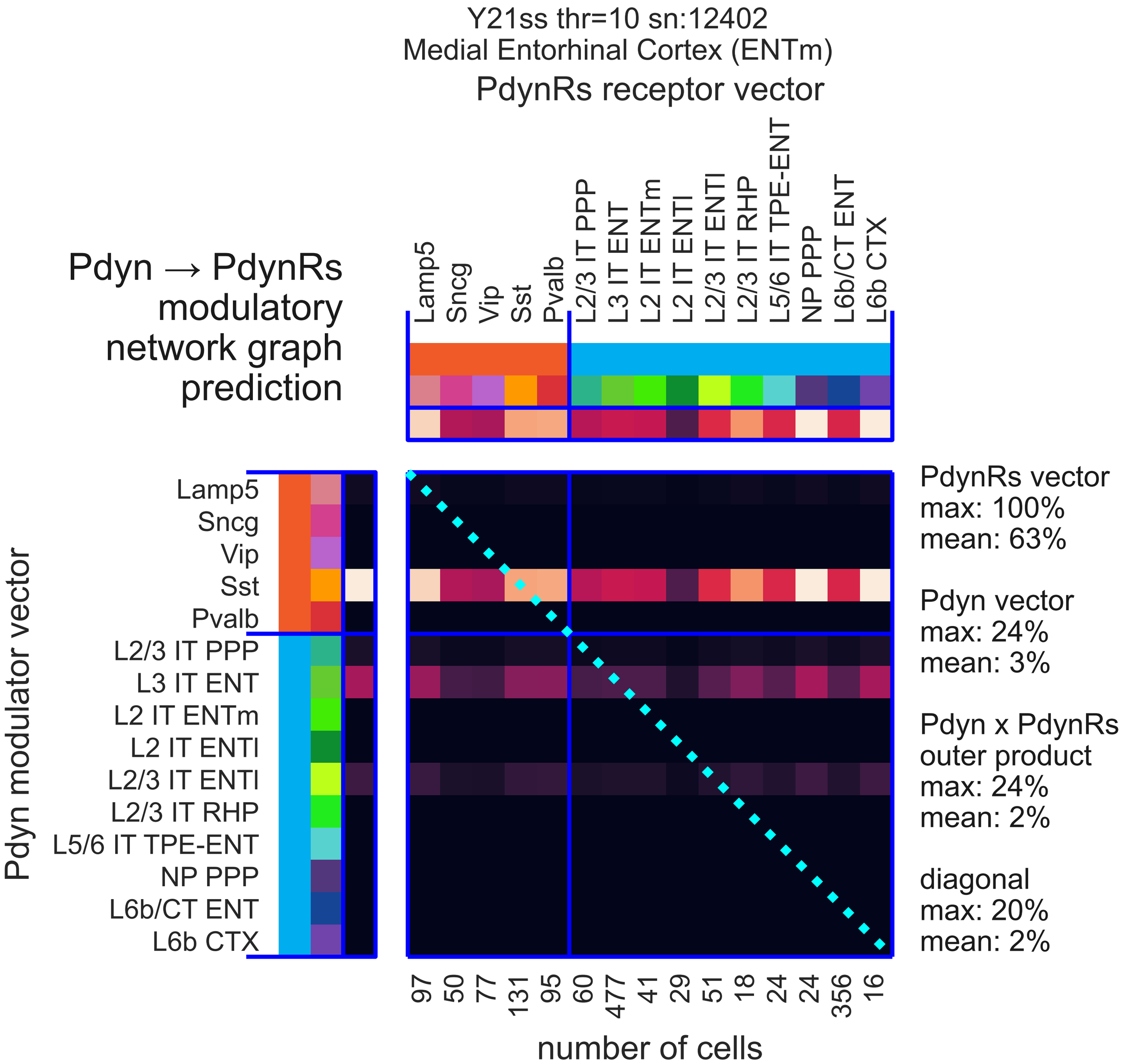



Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)
PdynRs receptor vector
Pdyn → PdynRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Pdyn modulator vector
PdynRs vector
max: 99%
mean: 66%
Pdyn vector
max: 80%
mean: 12%
Pdyn x PdynRs
outer product
max: 79%
mean: 8%
diagonal
max: 64%
mean: 9%
51
44
248
10
164
164
142
378
677
545
354
55
317
1,512
417
number of cells


Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
PdynRs receptor vector
Pdyn → PdynRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Pdyn modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
PdynRs vector
max: 87%
mean: 55%
Pdyn vector
max: 56%
mean: 7%
Pdyn x PdynRs
outer product
max: 49%
mean: 4%
diagonal
max: 49%
mean: 6%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

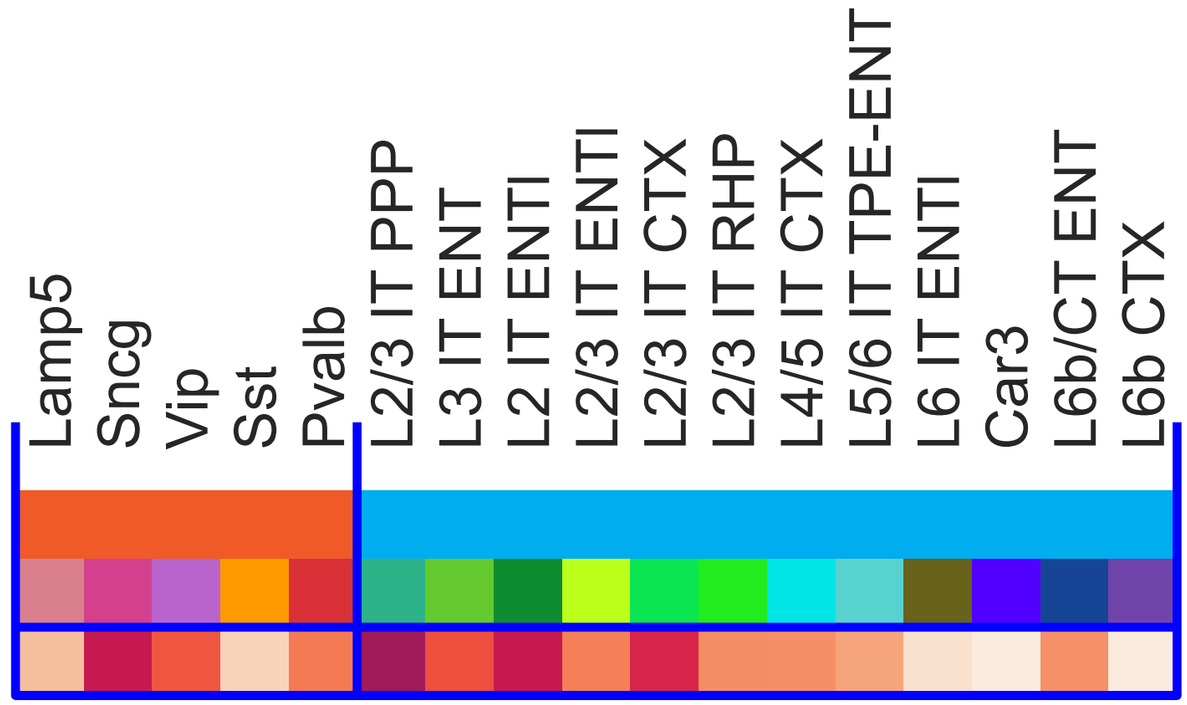


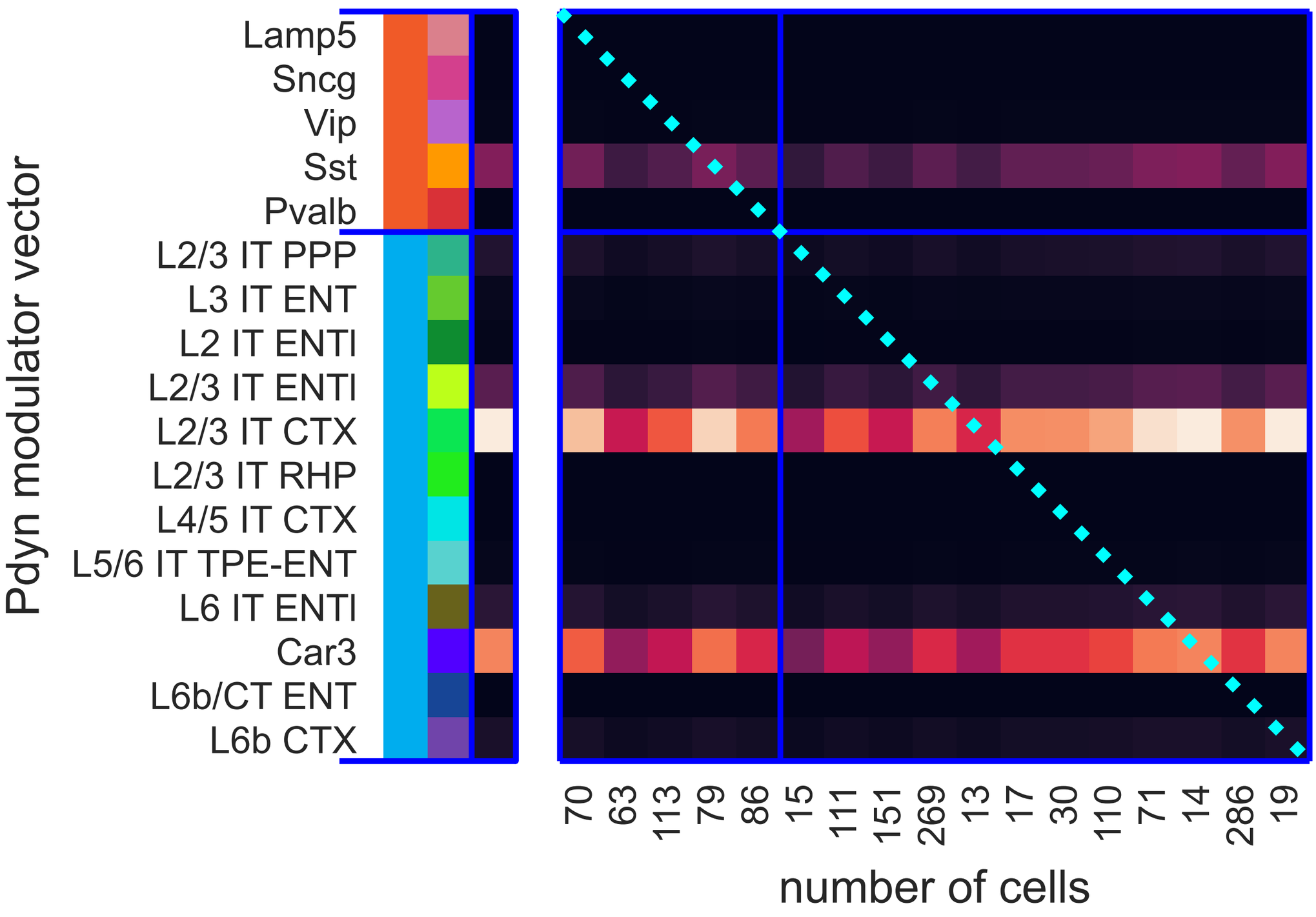

Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
PdynRs receptor vector
Pdyn → PdynRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Pdyn modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
PdynRs vector
max: 100%
mean: 63%
Pdyn vector
max: 24%
mean: 3%
Pdyn x PdynRs
outer product
max: 24%
mean: 2%
diagonal
max: 20%
mean: 2%

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)

PdynRs receptor vector

Pdyn → PdynRs
modulatory
network graph
prediction





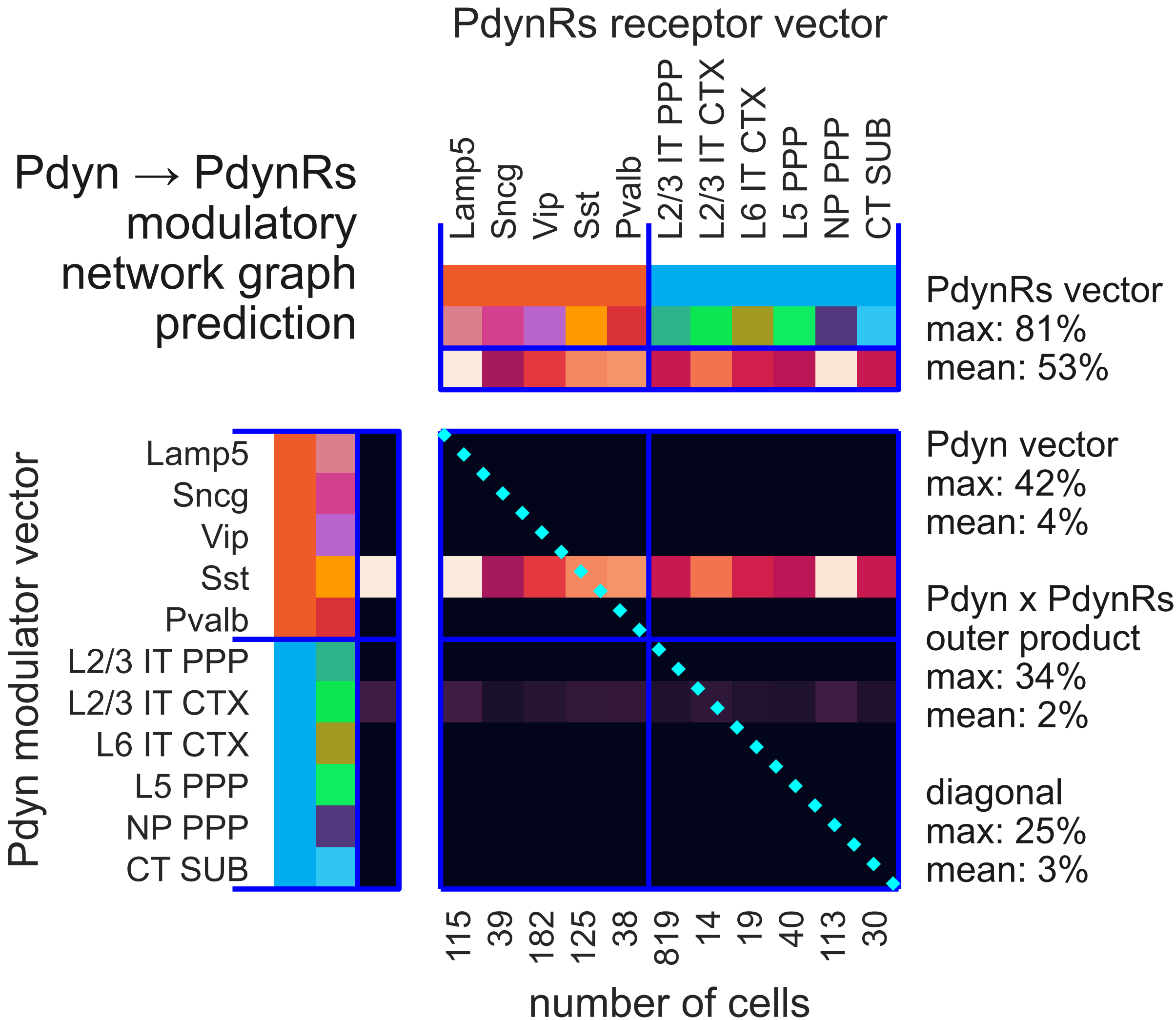
PdynRs vector
max: 100%
mean: 74%

Pdyn vector
max: 77%
mean: 12%

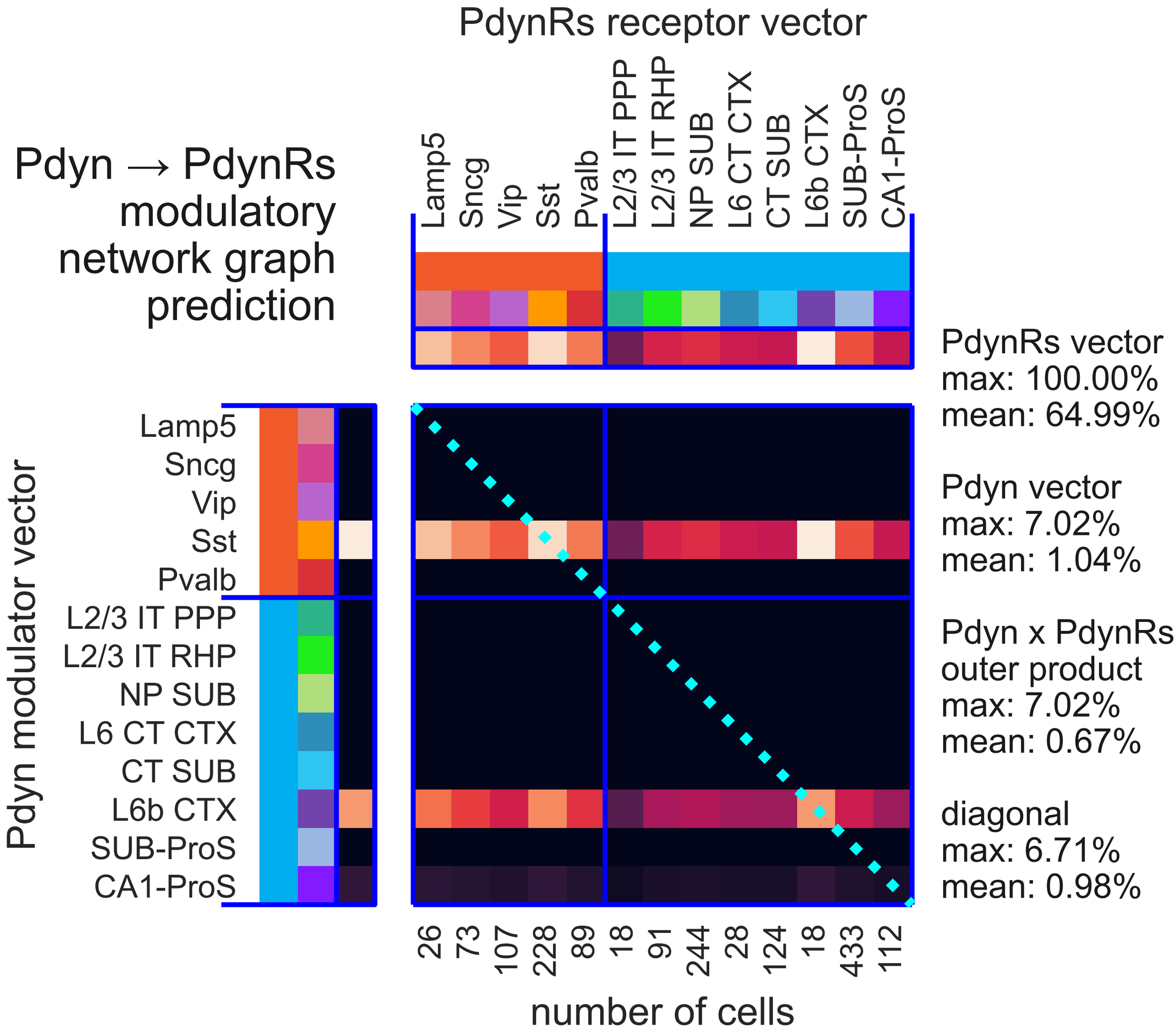
Pdyn x PdynRs
outer product
max: 77%
mean: 9%

diagonal
max: 57%
mean: 9%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



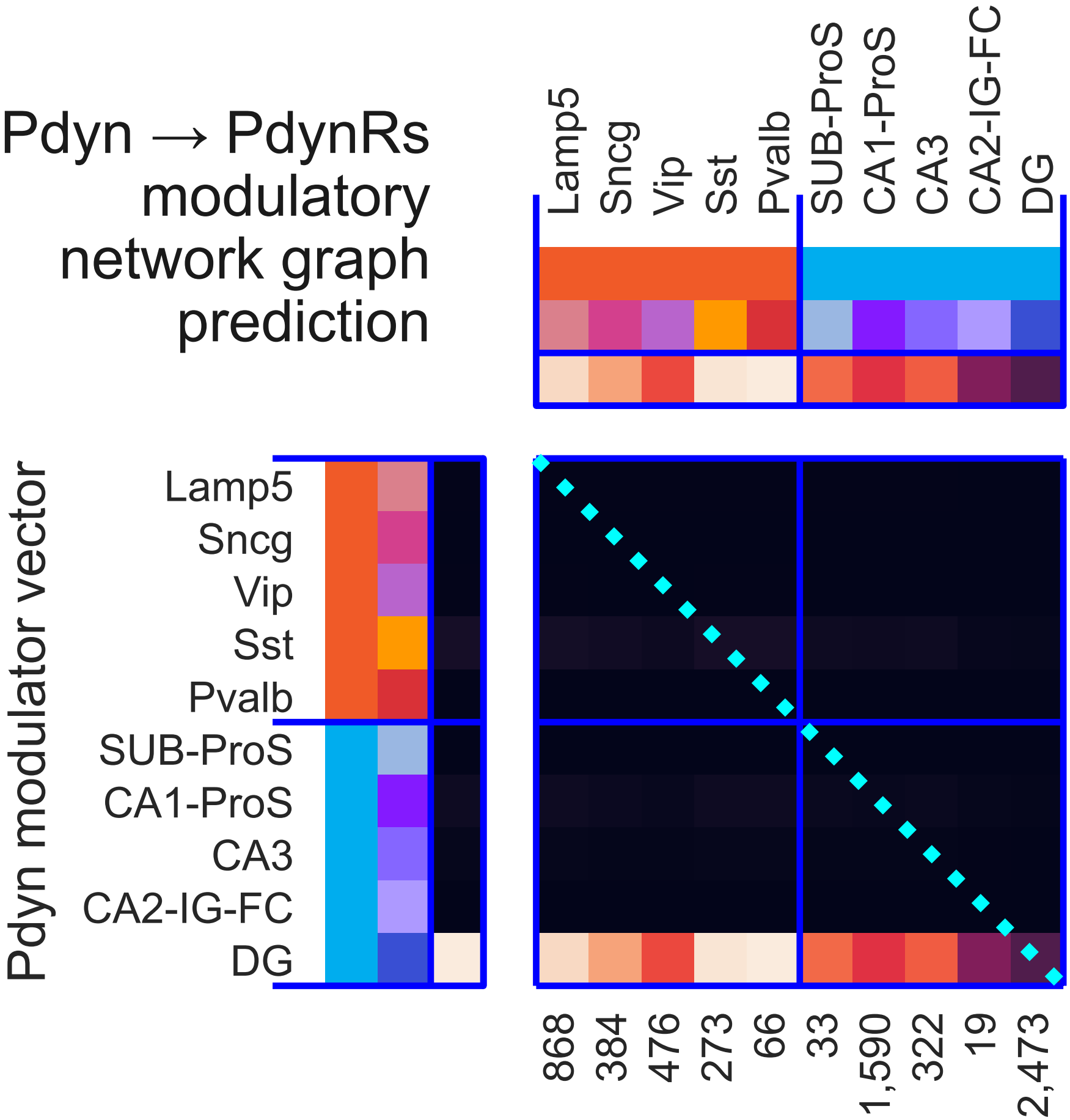
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



Y21ss thr=10 sn:12402
Hippocampus (HIP)

PdynRs receptor vector

Pdyn → PdynRs
modulatory
network graph
prediction



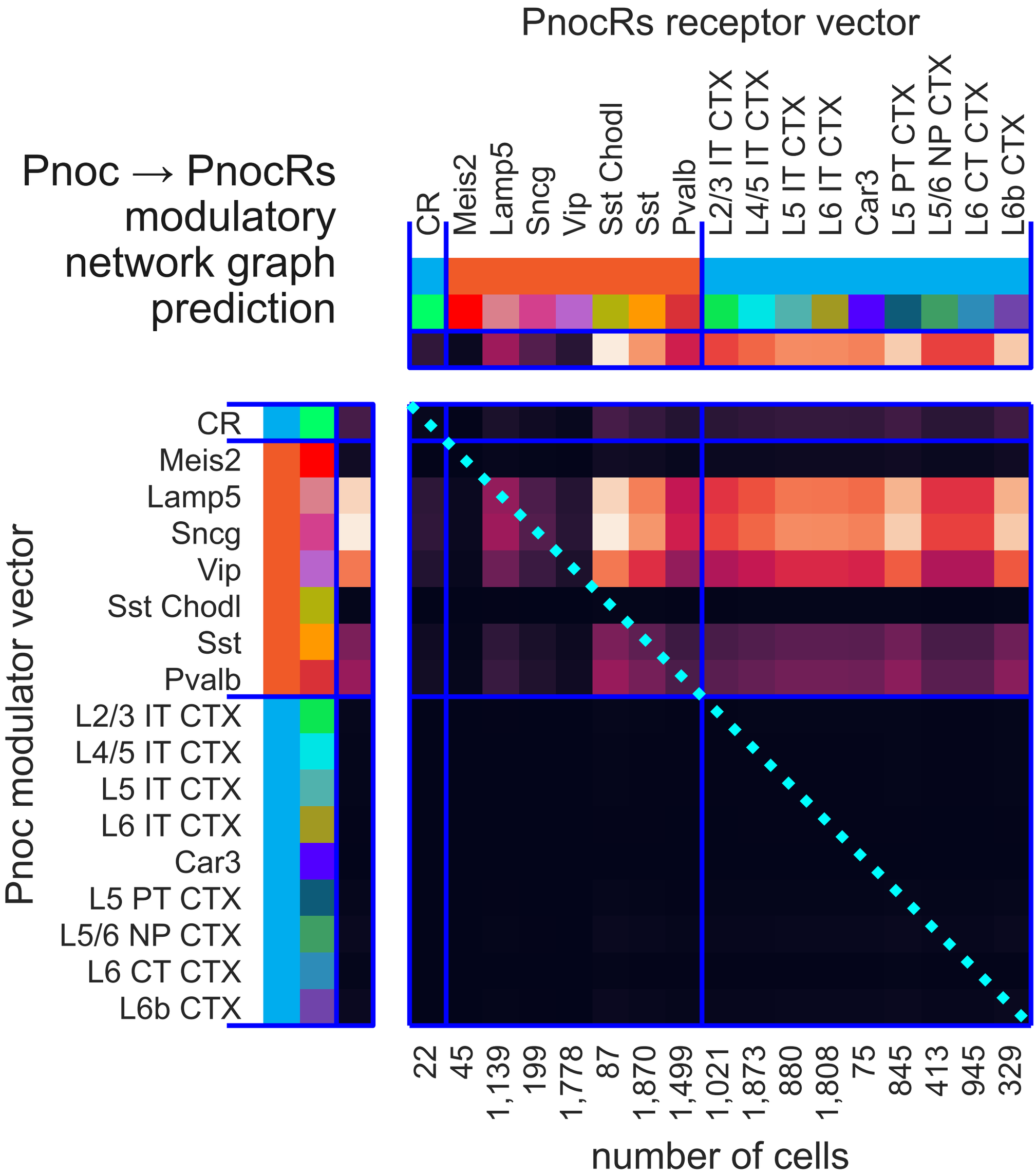
PdynRs vector
max: 97%
mean: 66%

Pdyn vector
max: 45%
mean: 5%

Pdyn x PdynRs
outer product
max: 44%
mean: 3%

diagonal
max: 9%
mean: 1%

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



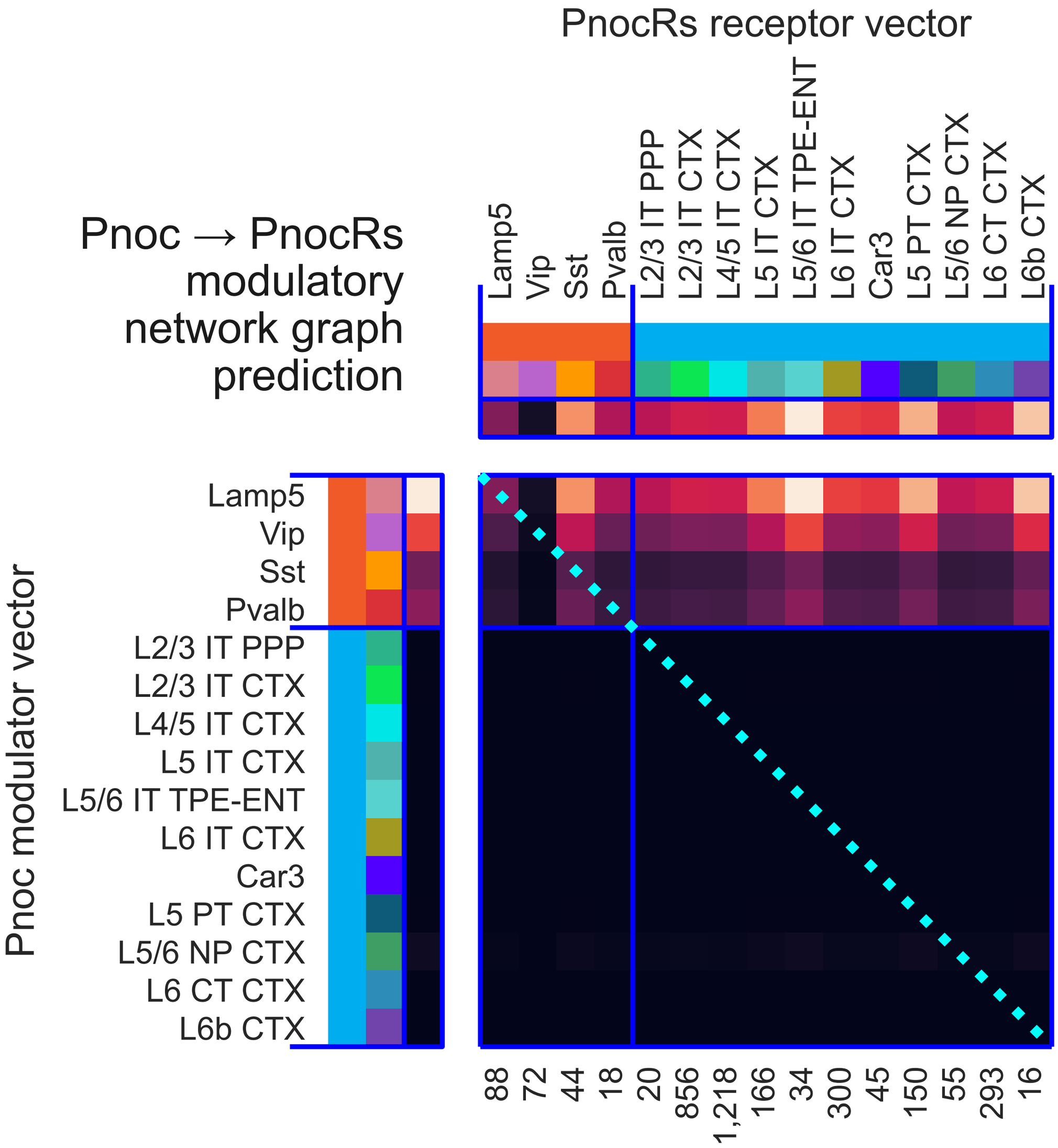
PnocRs vector
max: 72%
mean: 41%

Pnoc vector
max: 98%
mean: 21%

Pnoc x PnocRs
outer product
max: 71%
mean: 9%

diagonal
max: 26%
mean: 5%

Y21ss thr=10 sn:12402
Visual Cortex (VIS)



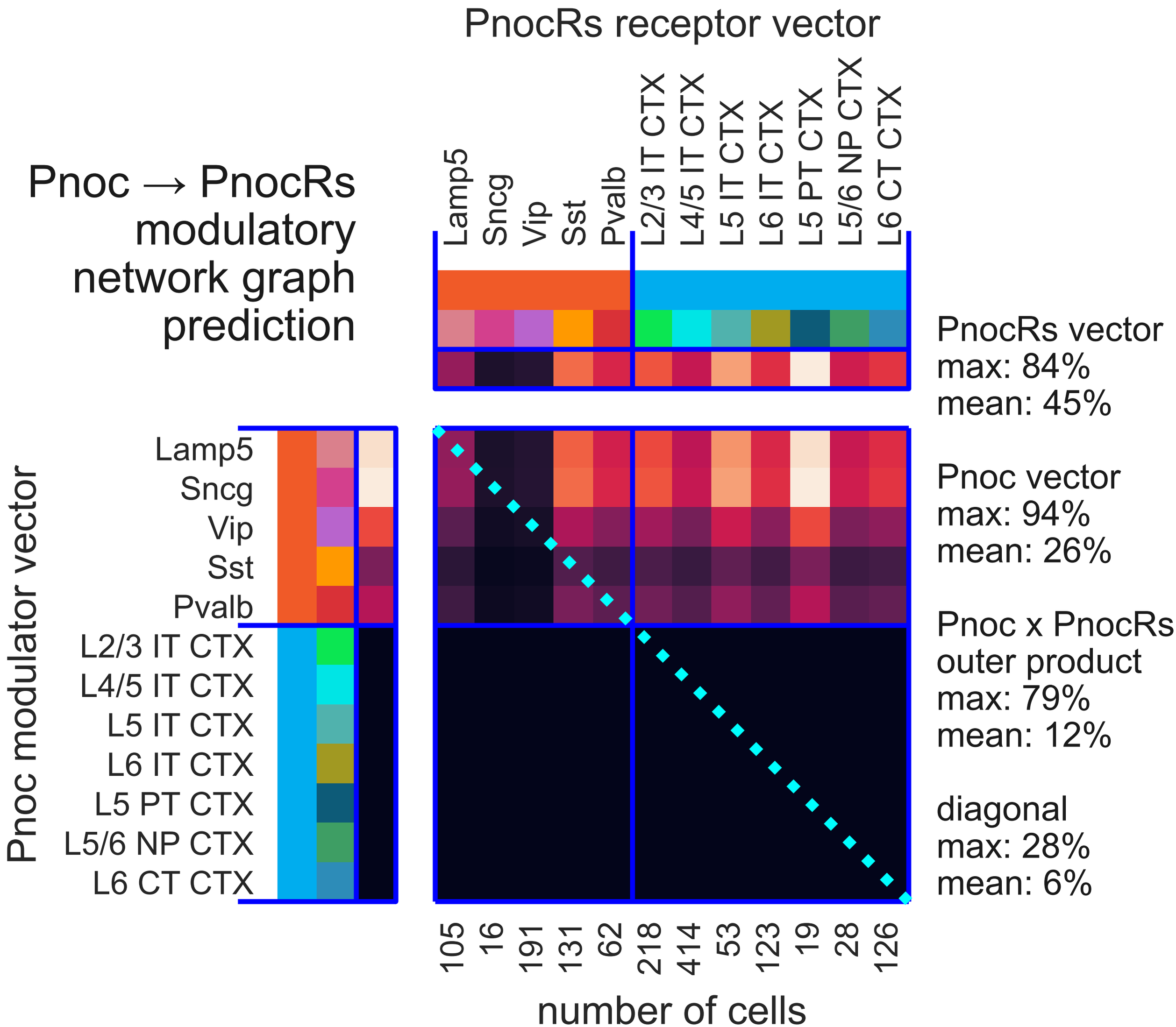
PnocRs vector
max: 76%
mean: 44%

Pnoc vector
max: 95%
mean: 15%

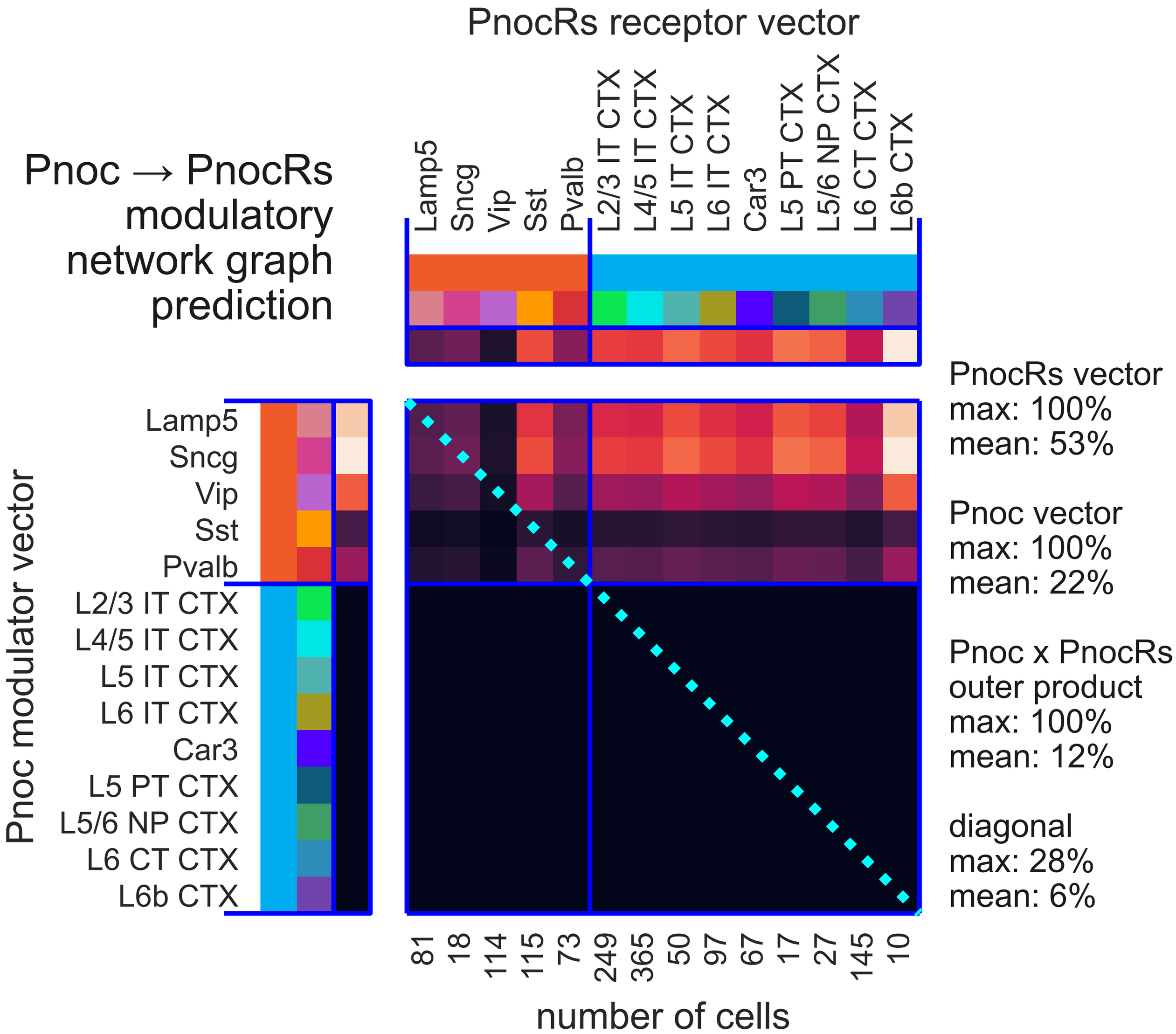
Pnoc x PnocRs
outer product
max: 73%
mean: 7%

diagonal
max: 24%
mean: 4%

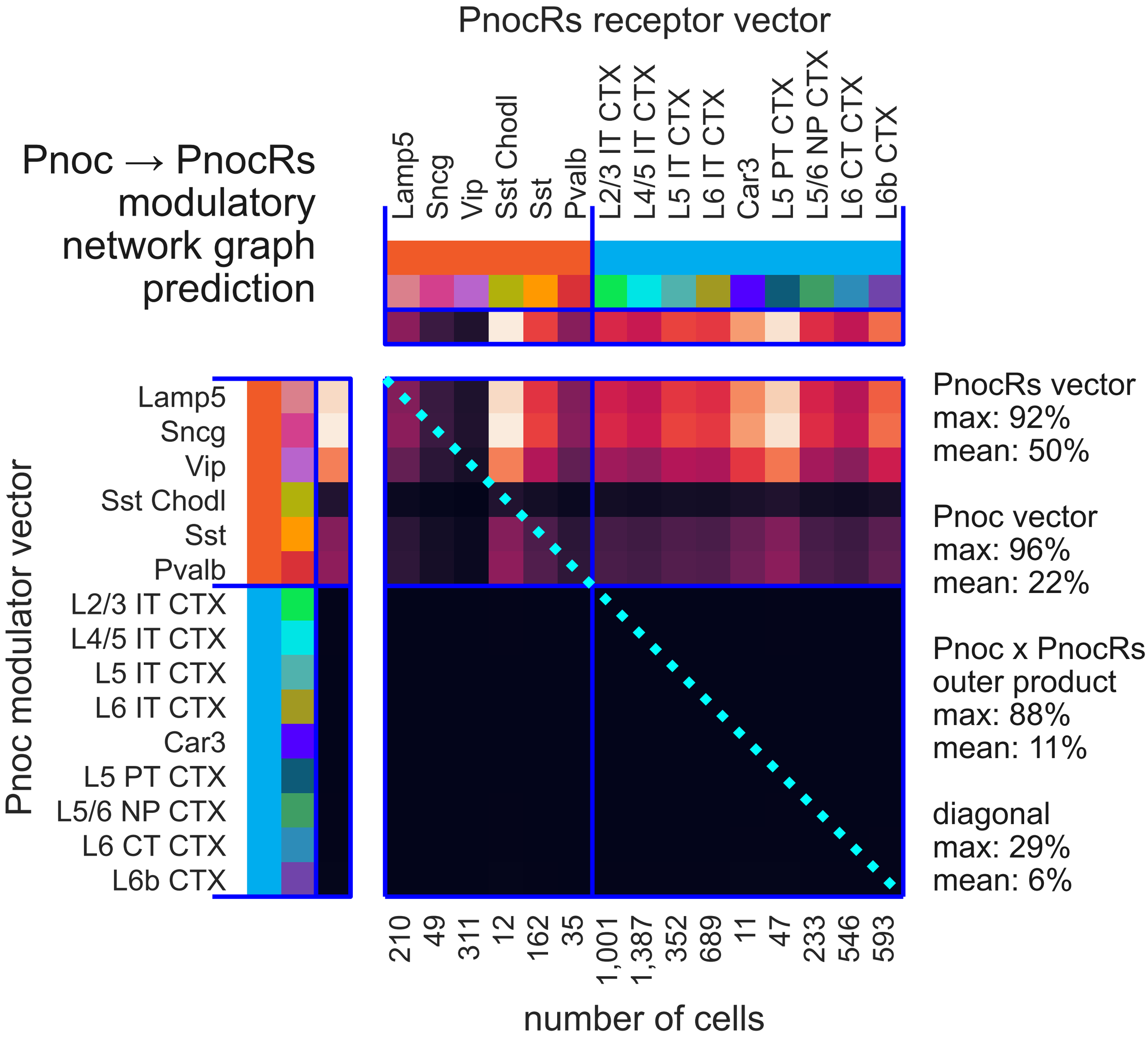
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



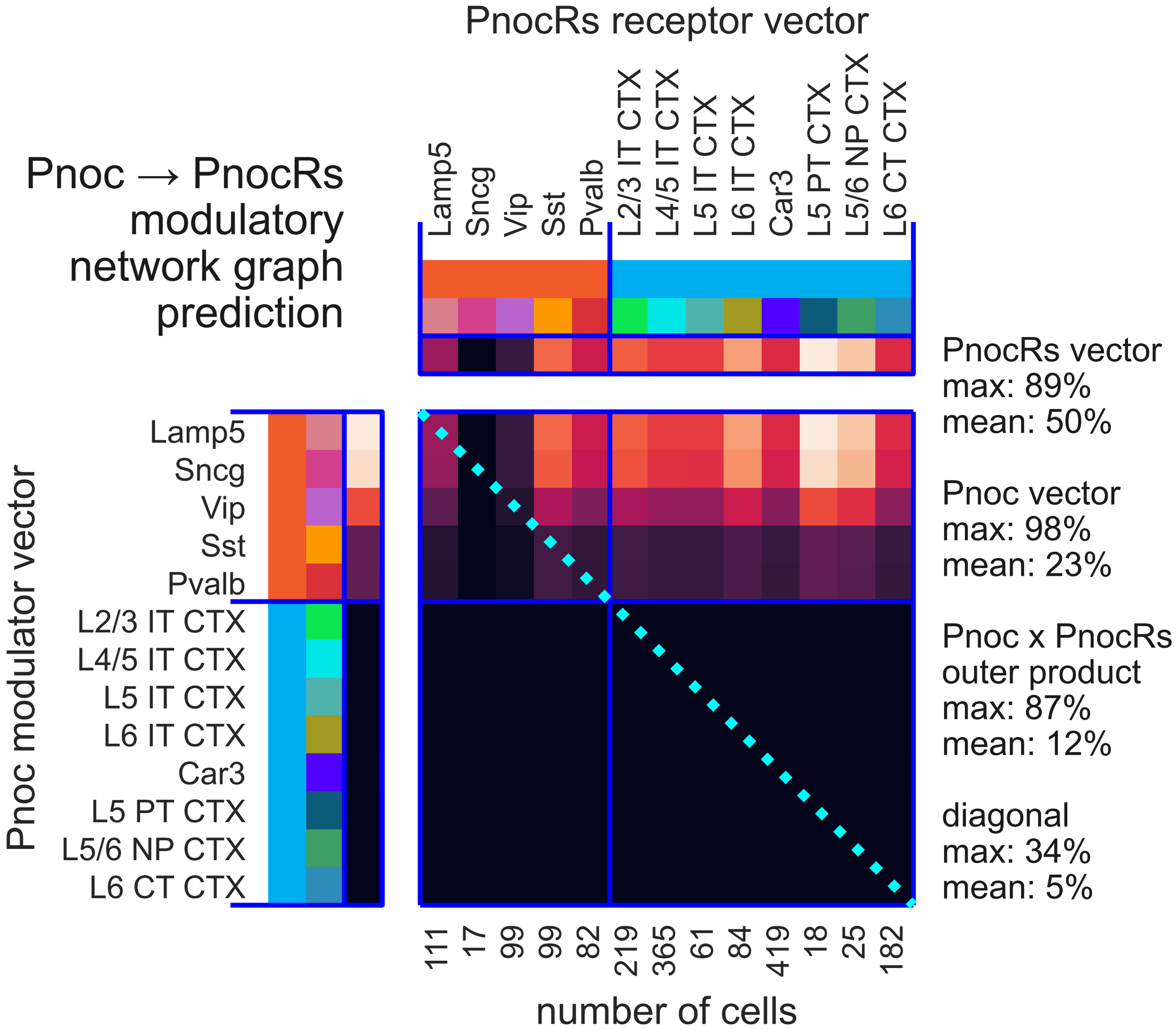
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)



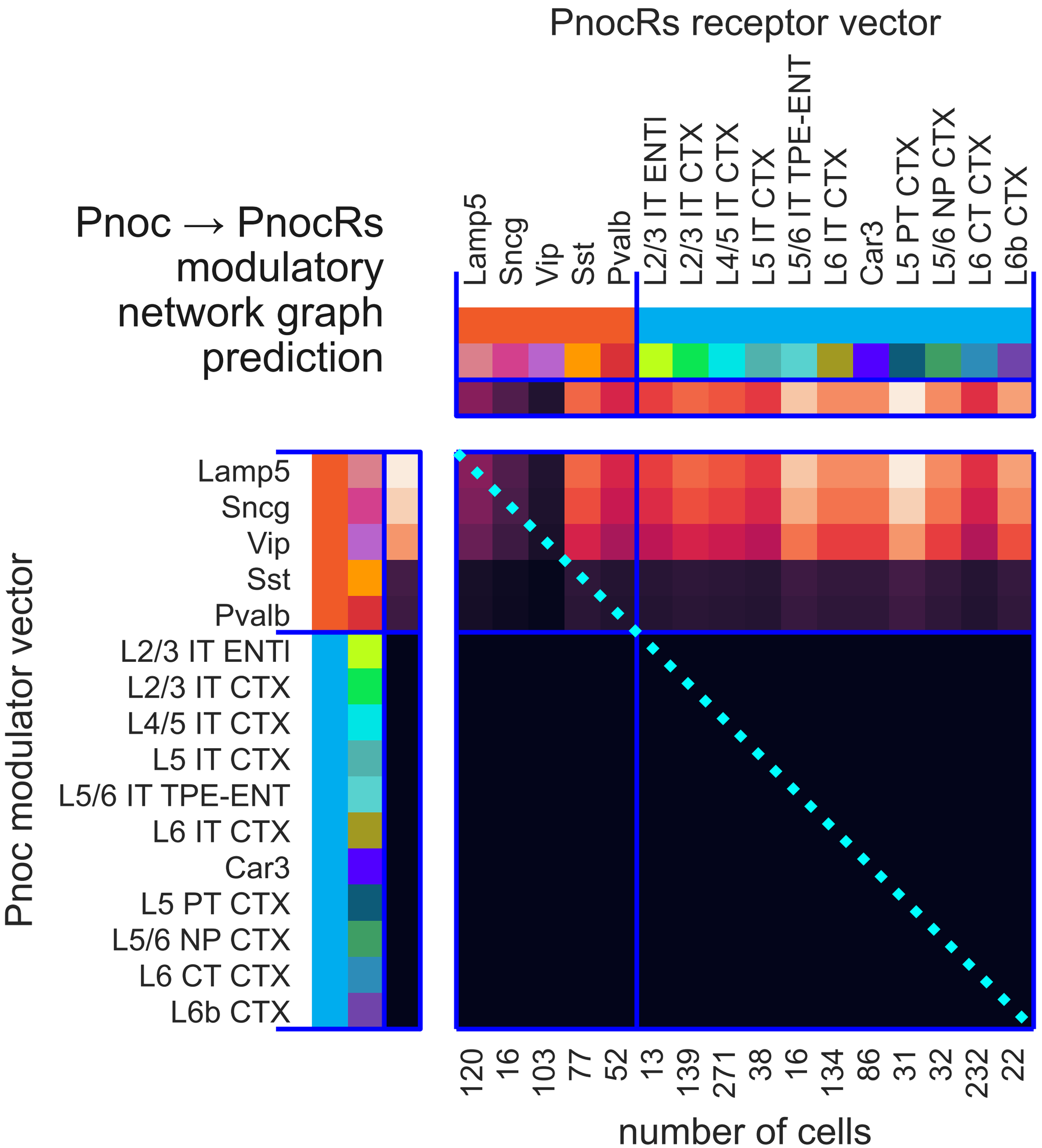
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



Y21ss thr=10 sn:12402
Gustatory Cortex (GU)



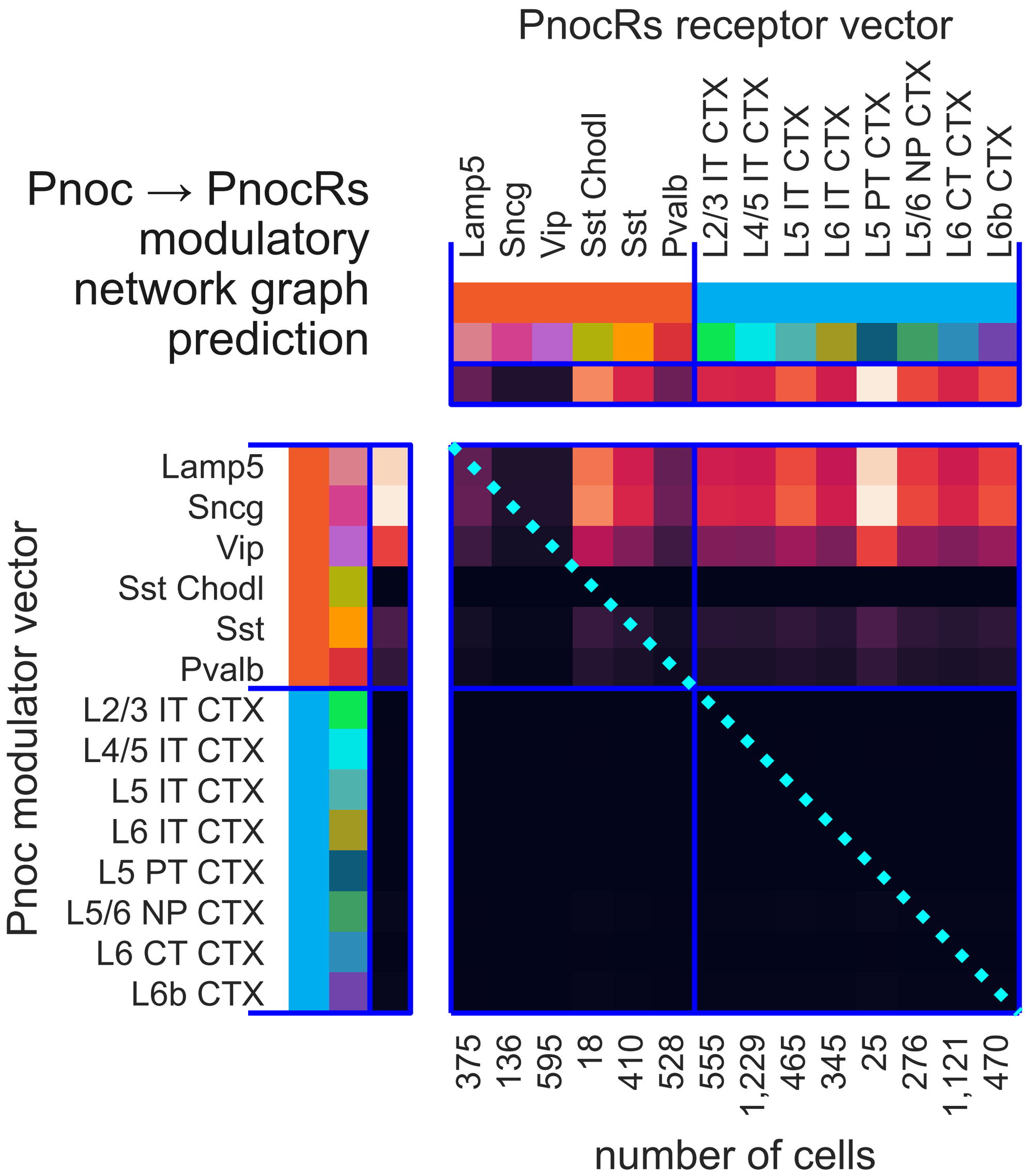
PnocRs vector
max: 90%
mean: 56%

Pnoc vector
max: 94%
mean: 18%

Pnoc x PnocRs
outer product
max: 85%
mean: 10%

diagonal
max: 29%
mean: 4%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



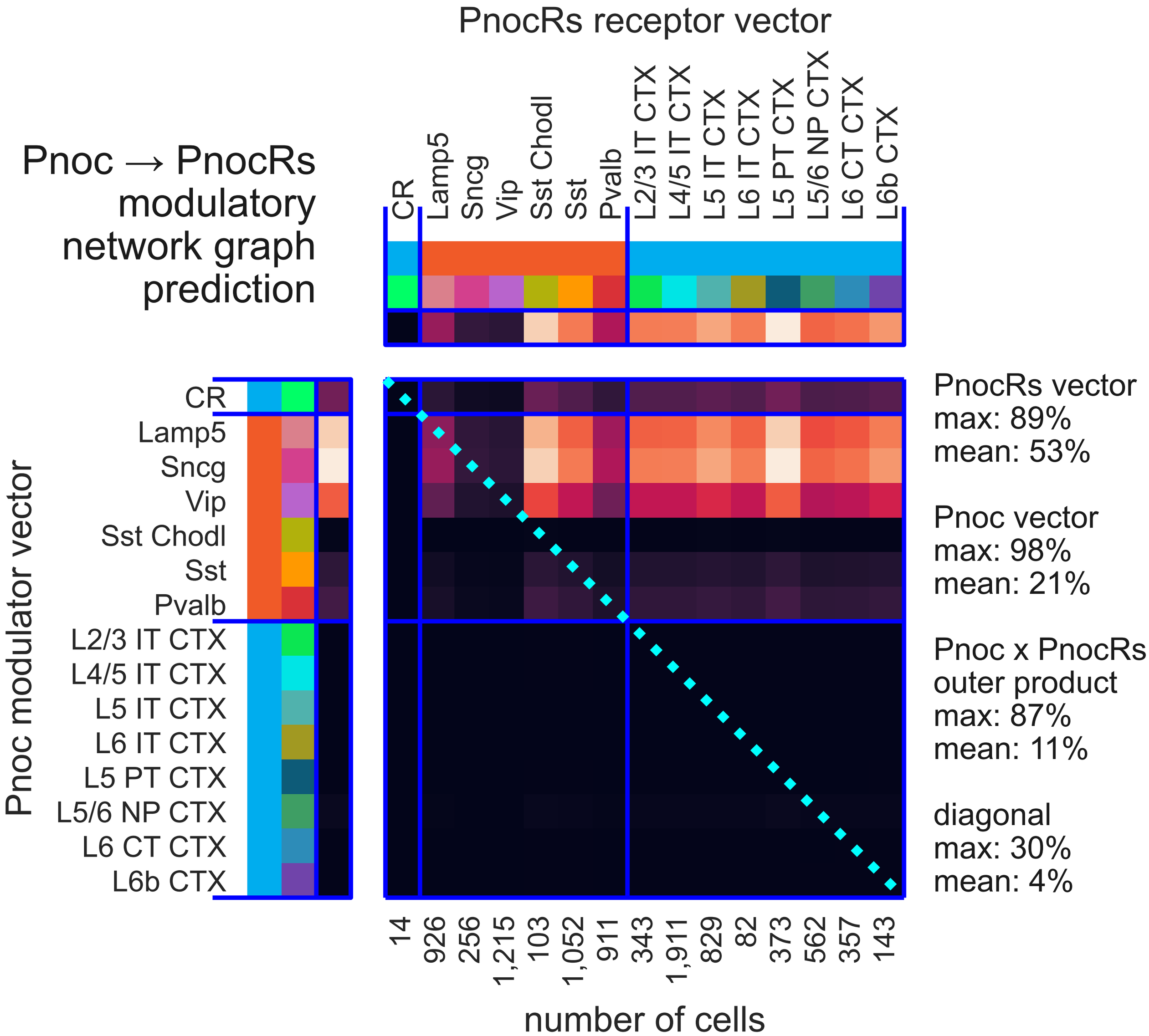
PnocRs vector
max: 96%
mean: 48%

Pnoc vector
max: 98%
mean: 20%

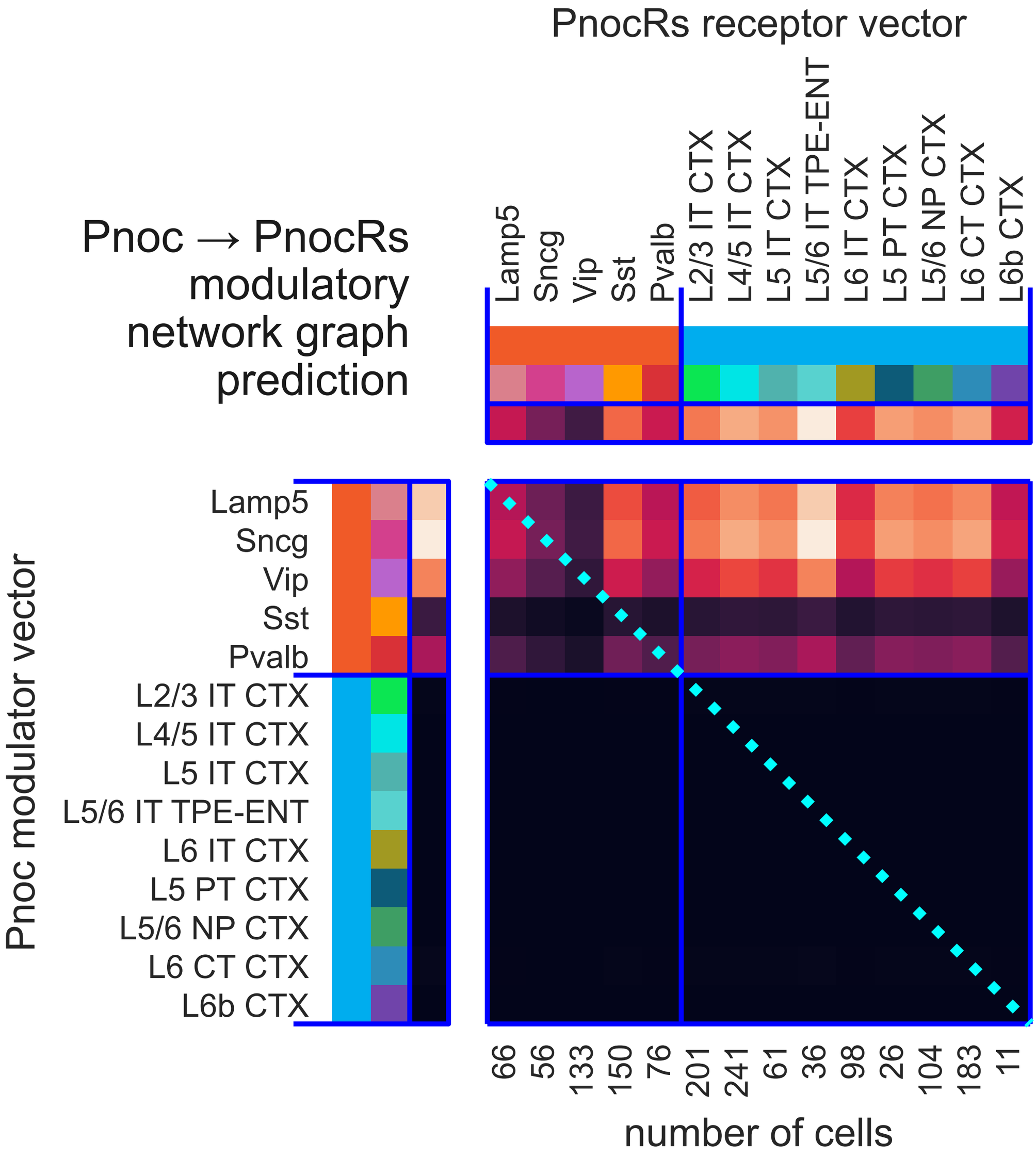
Pnoc x PnocRs
outer product
max: 94%
mean: 10%

diagonal
max: 23%
mean: 4%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

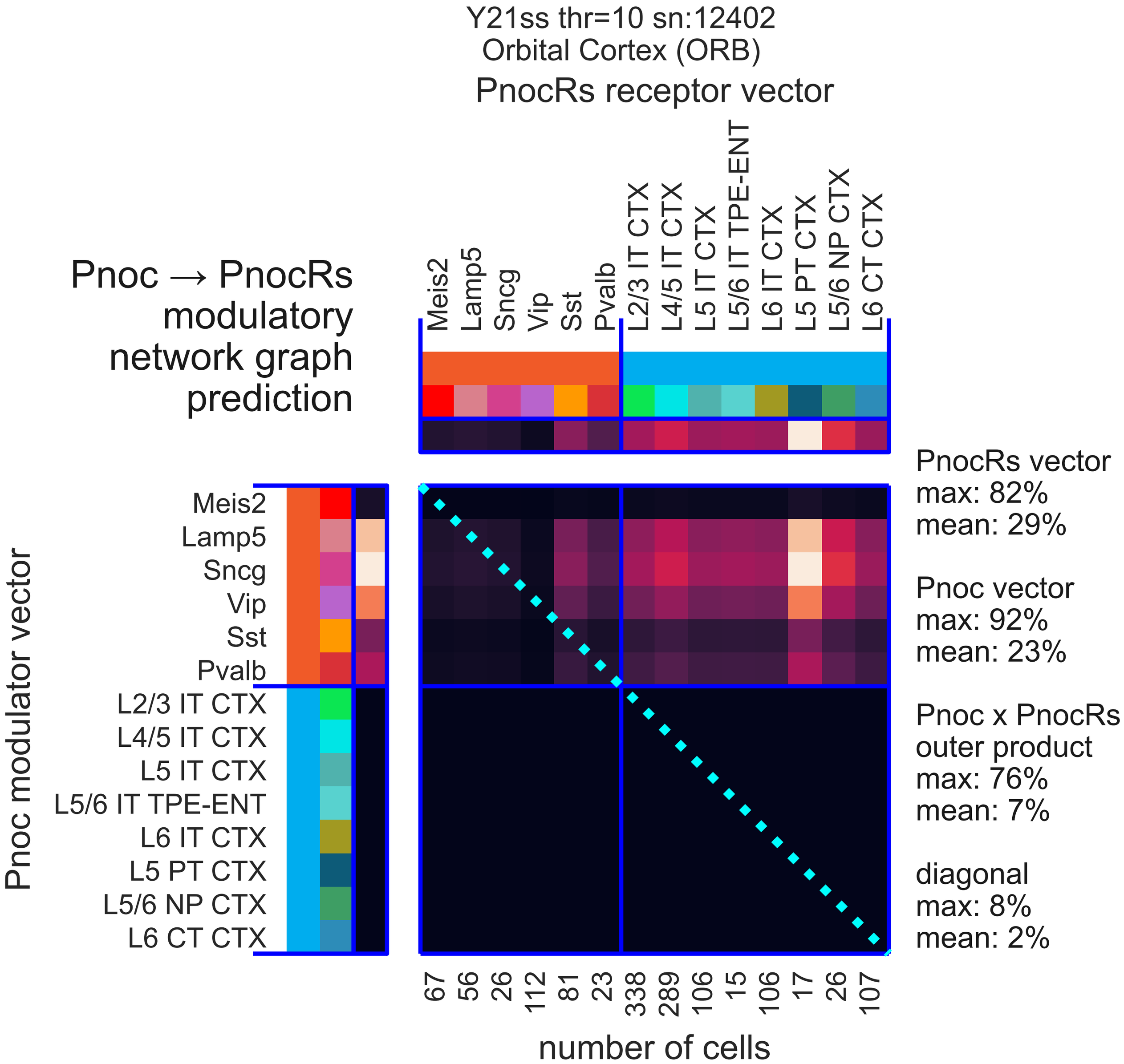


PnocRs vector
max: 53%
mean: 34%

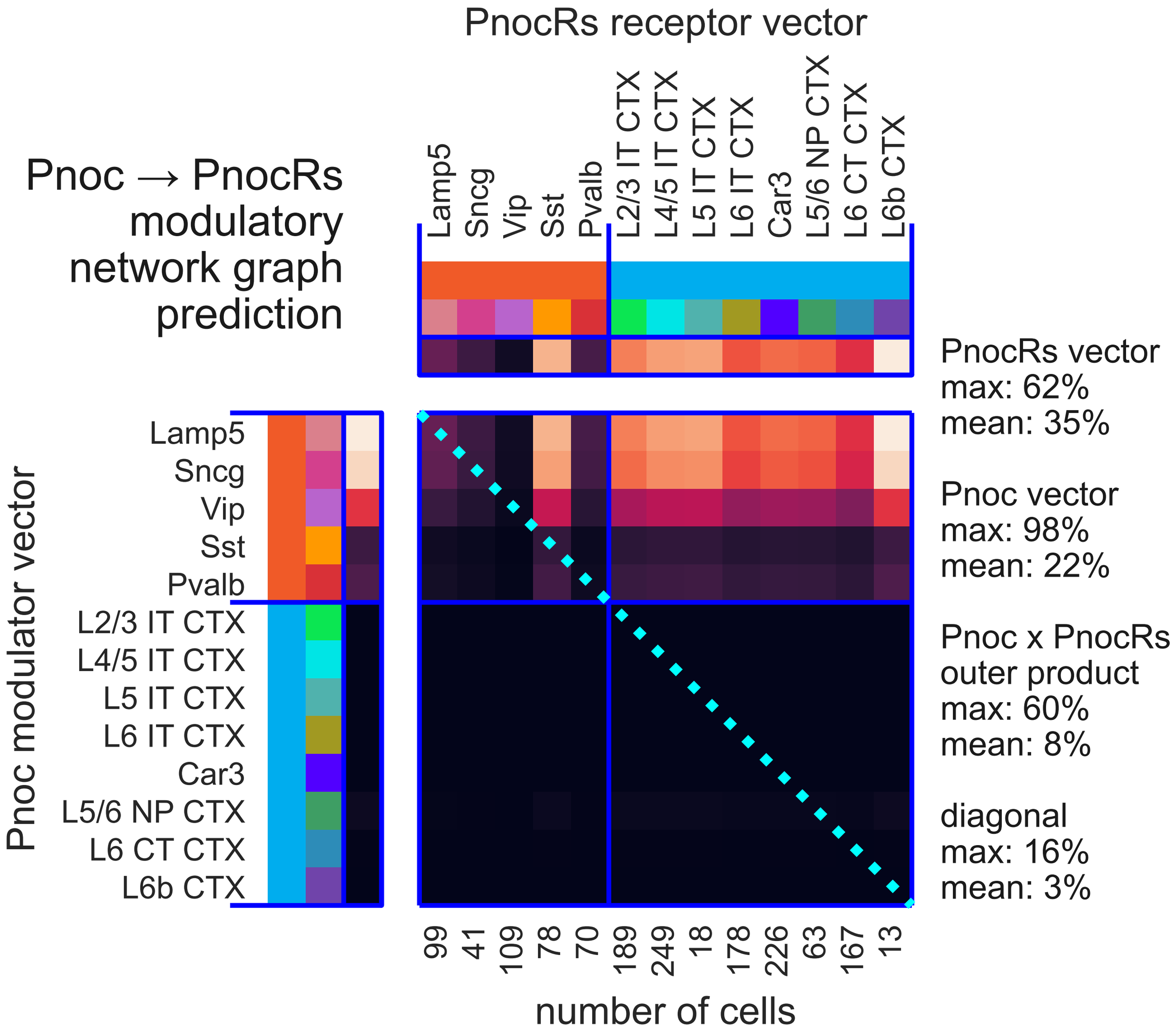
Pnoc vector
max: 88%
mean: 20%

Pnoc x PnocRs
outer product
max: 46%
mean: 7%

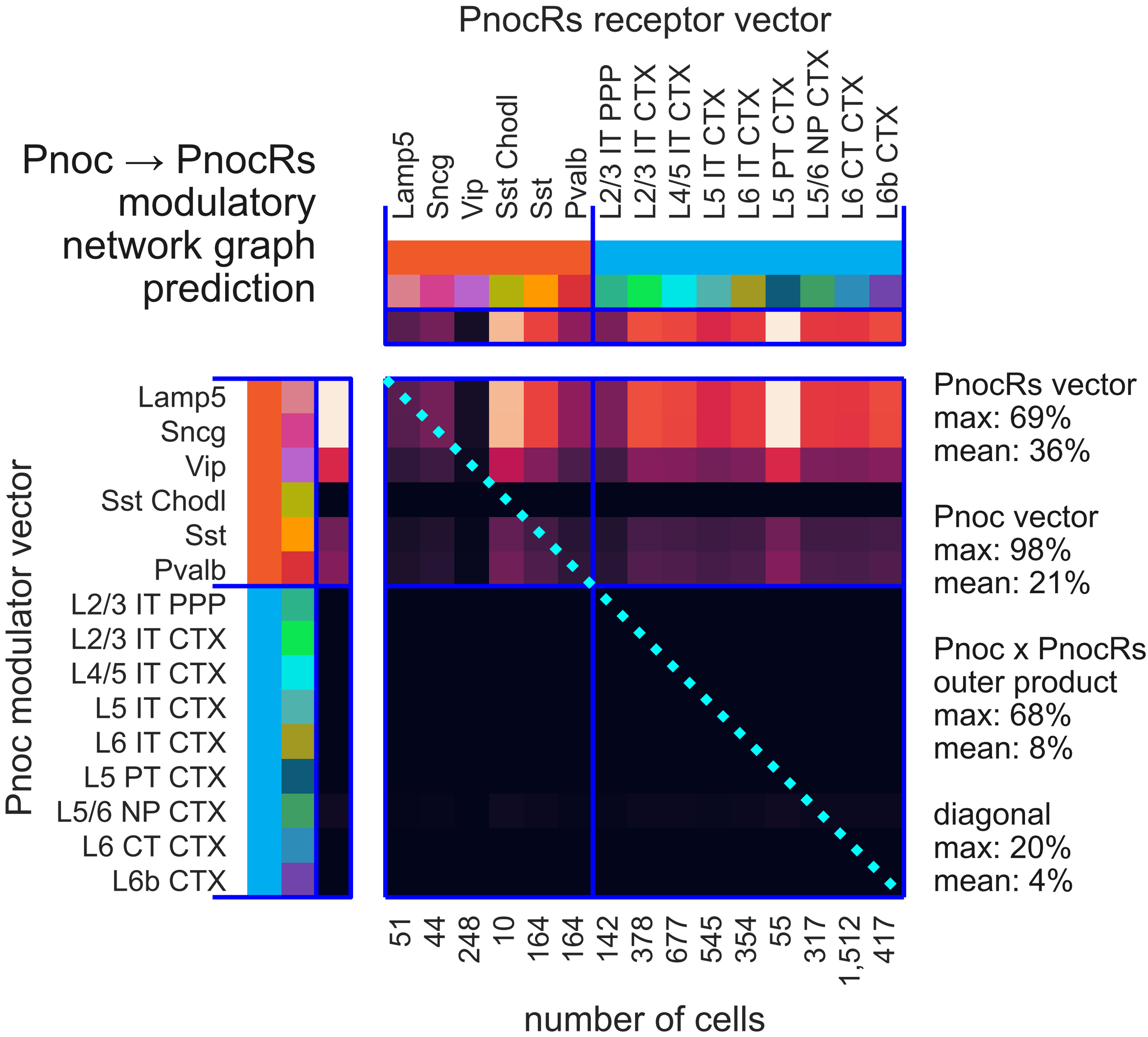
diagonal
max: 21%
mean: 4%


Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
PnocRs receptor vector
Pnoc → PnocRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Pnoc modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
PnocRs vector
max: 82%
mean: 29%
Pnoc vector
max: 92%
mean: 23%
Pnoc x PnocRs
outer product
max: 76%
mean: 7%
diagonal
max: 8%
mean: 2%

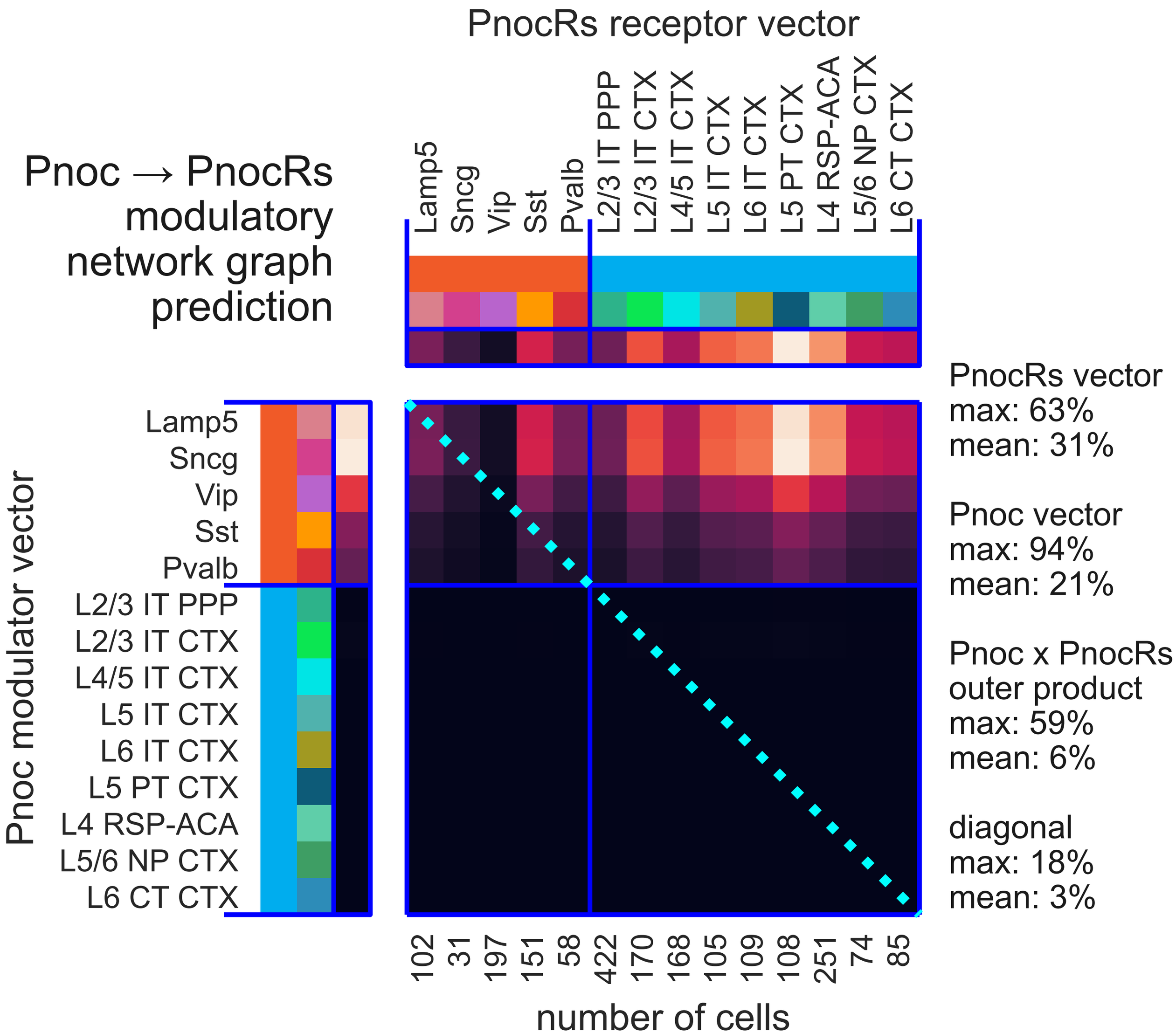
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



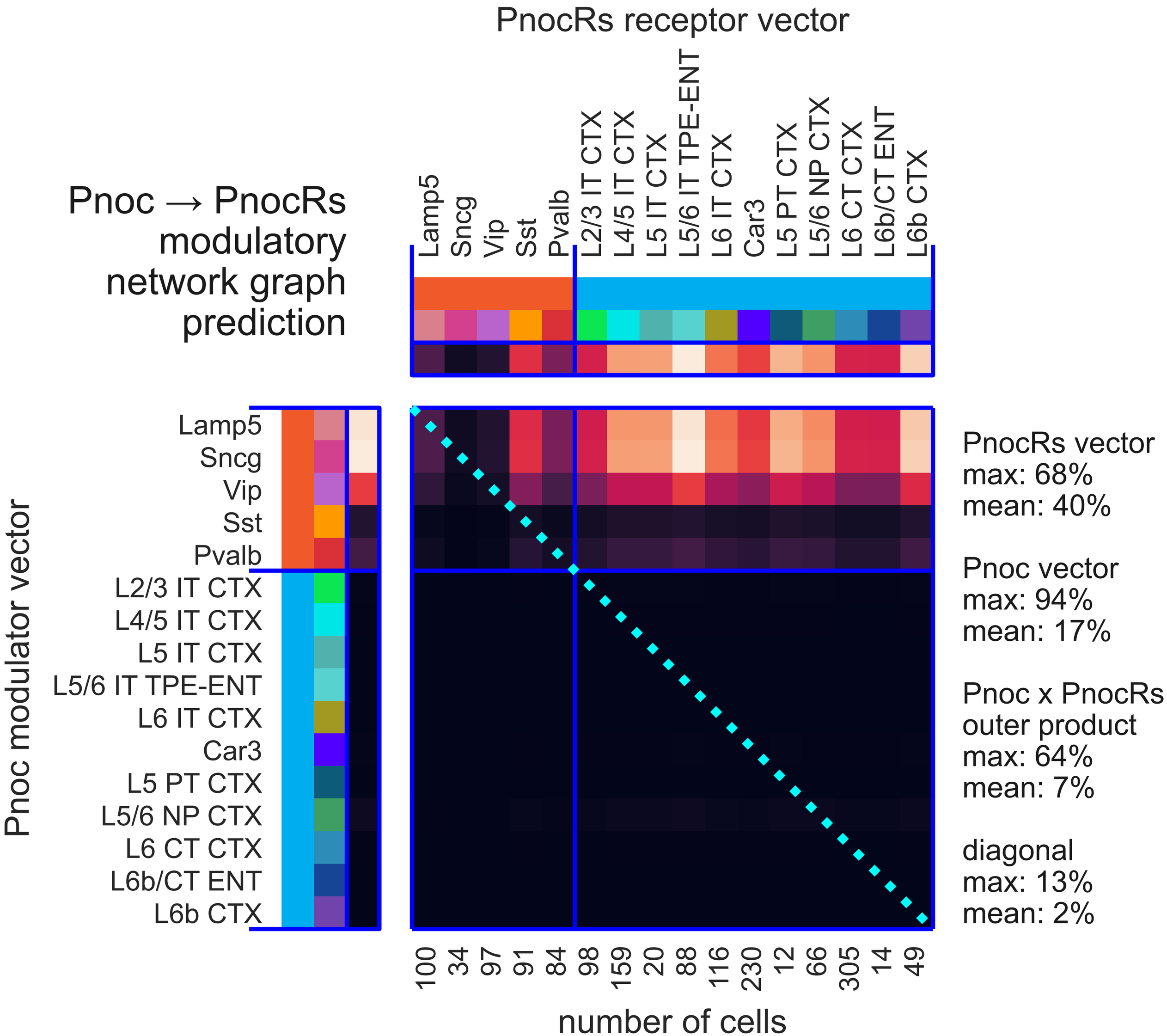
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)



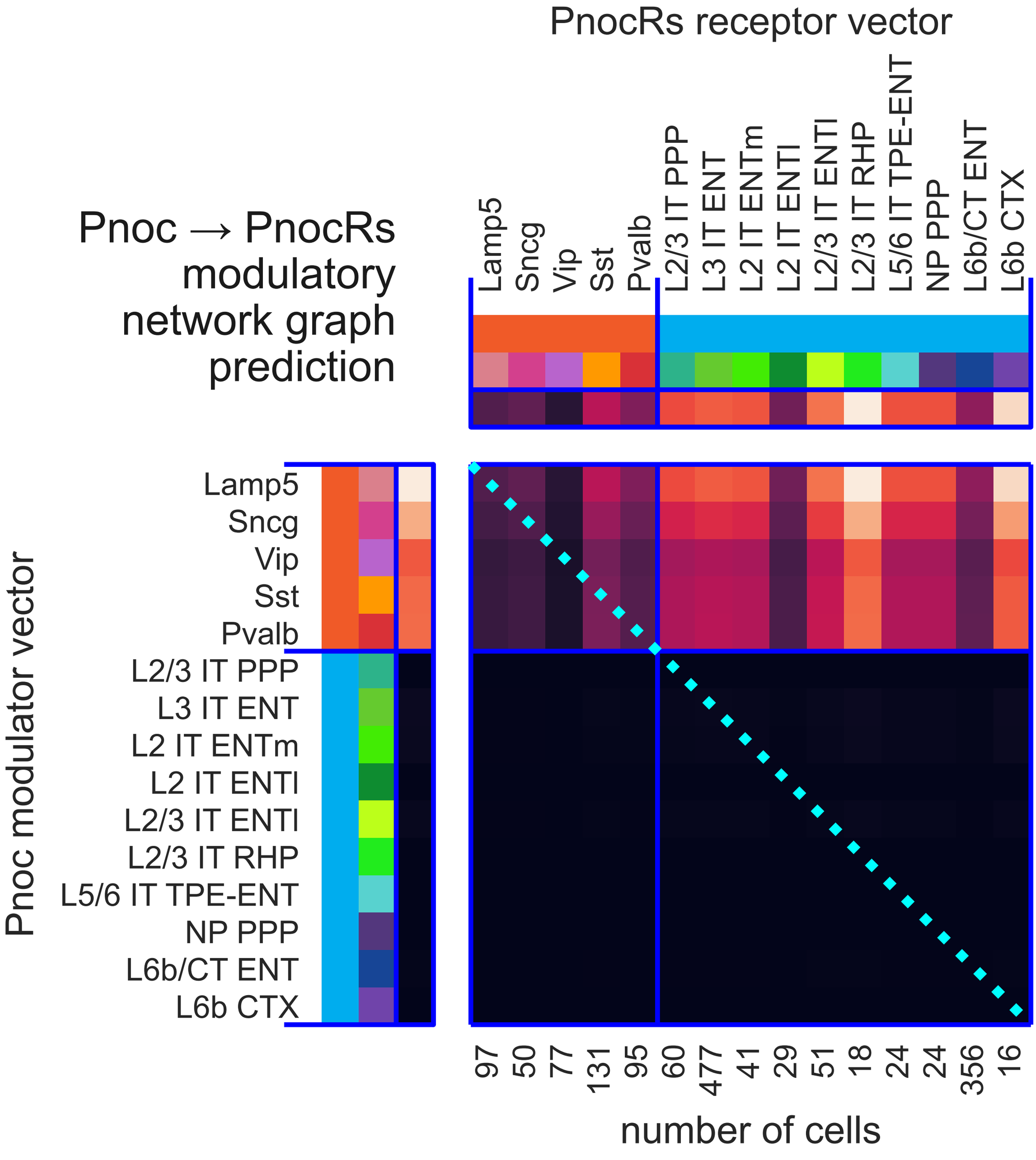
Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)



Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)



Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)



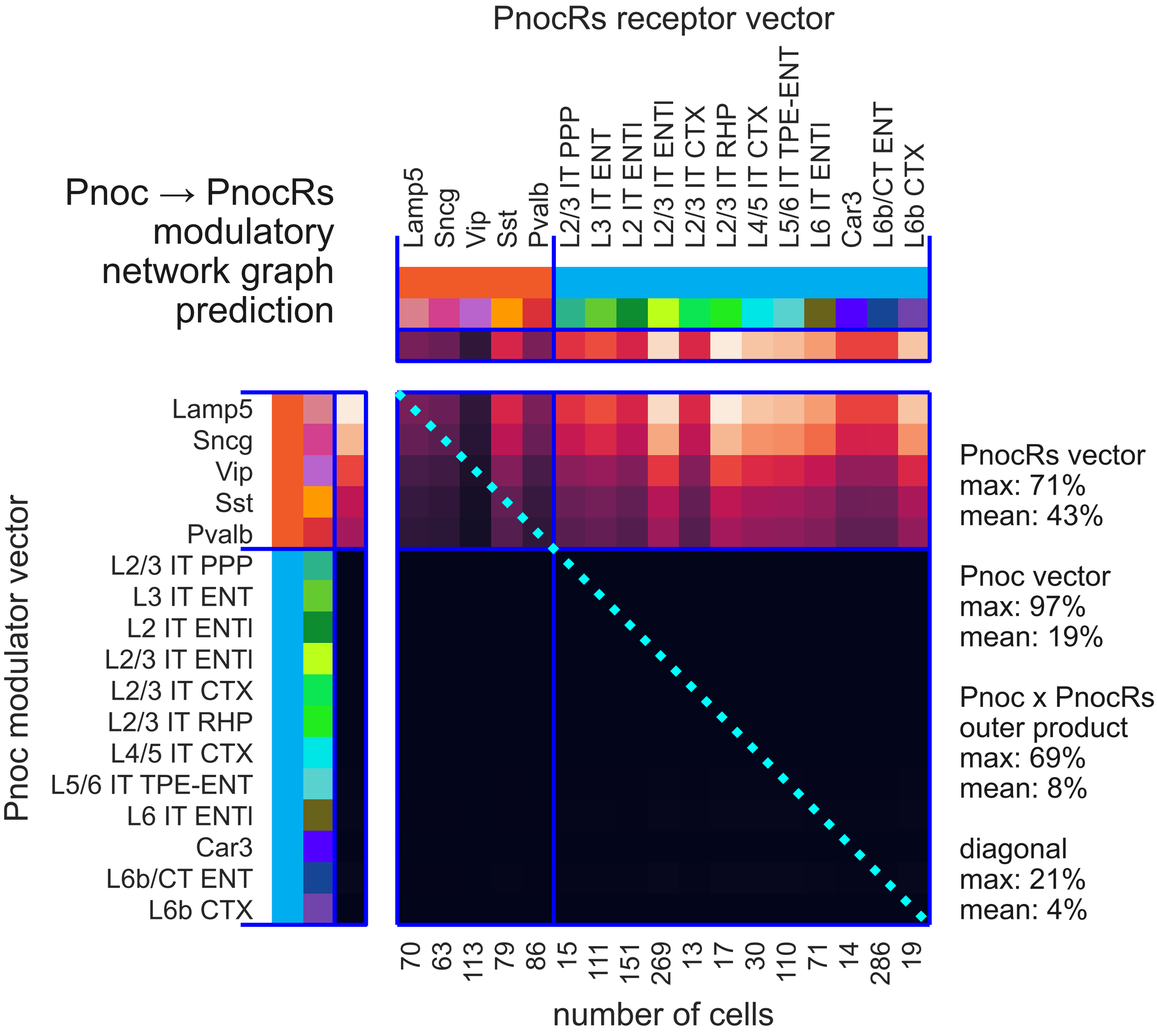
PnocRs vector
max: 72%
mean: 38%

Pnoc vector
max: 98%
mean: 26%

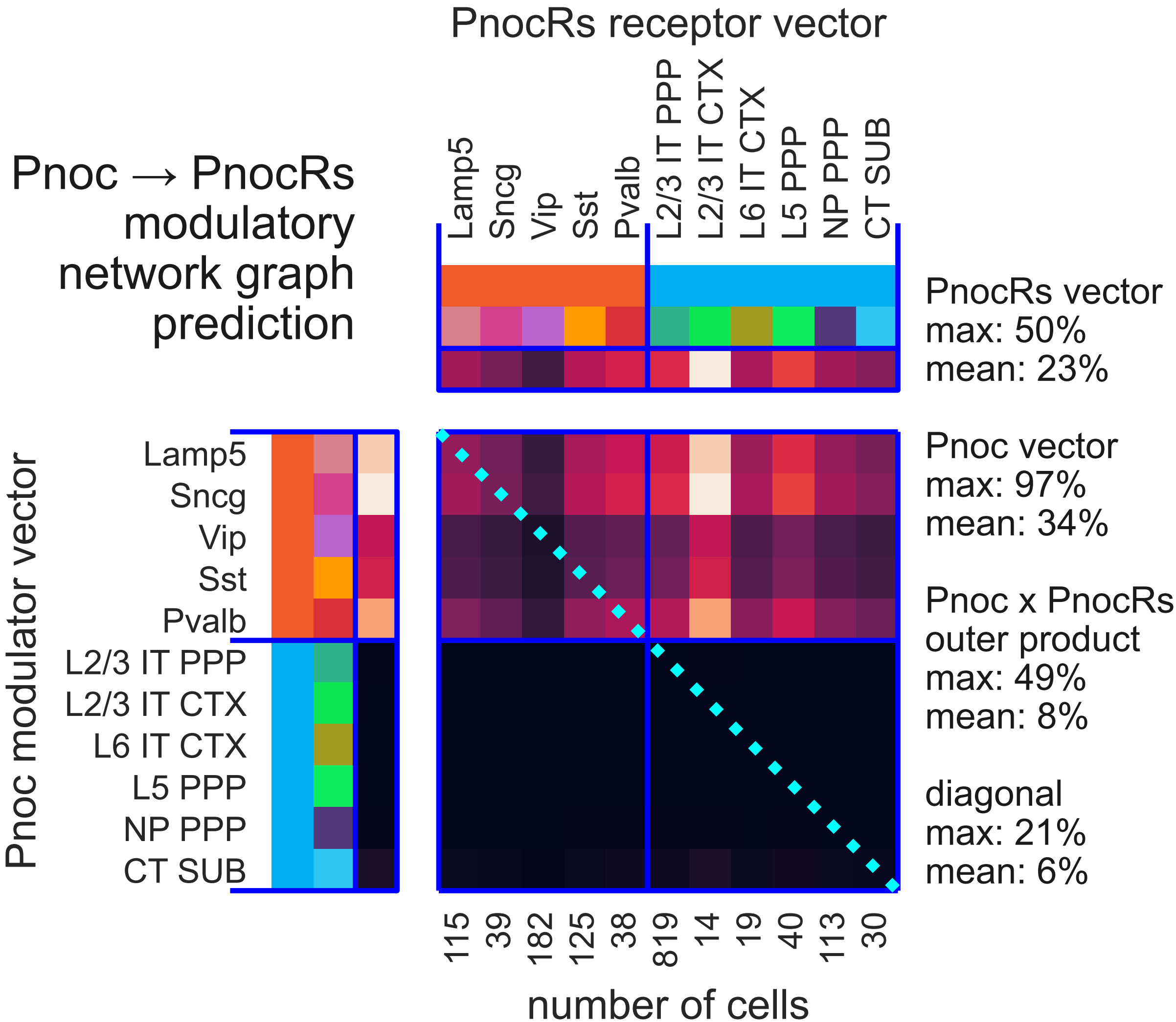
Pnoc x PnocRs
outer product
max: 71%
mean: 10%

diagonal
max: 22%
mean: 5%

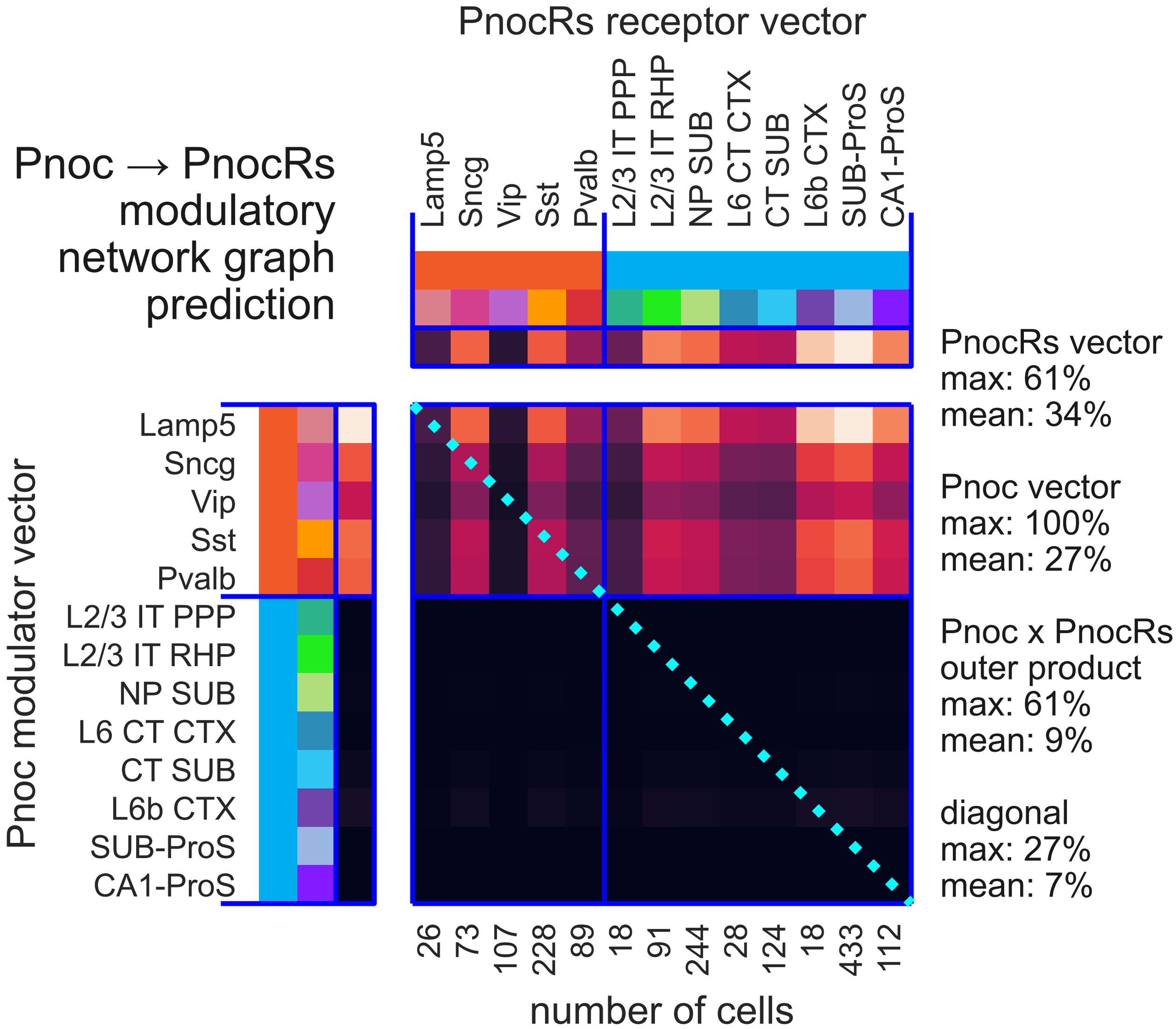
Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)

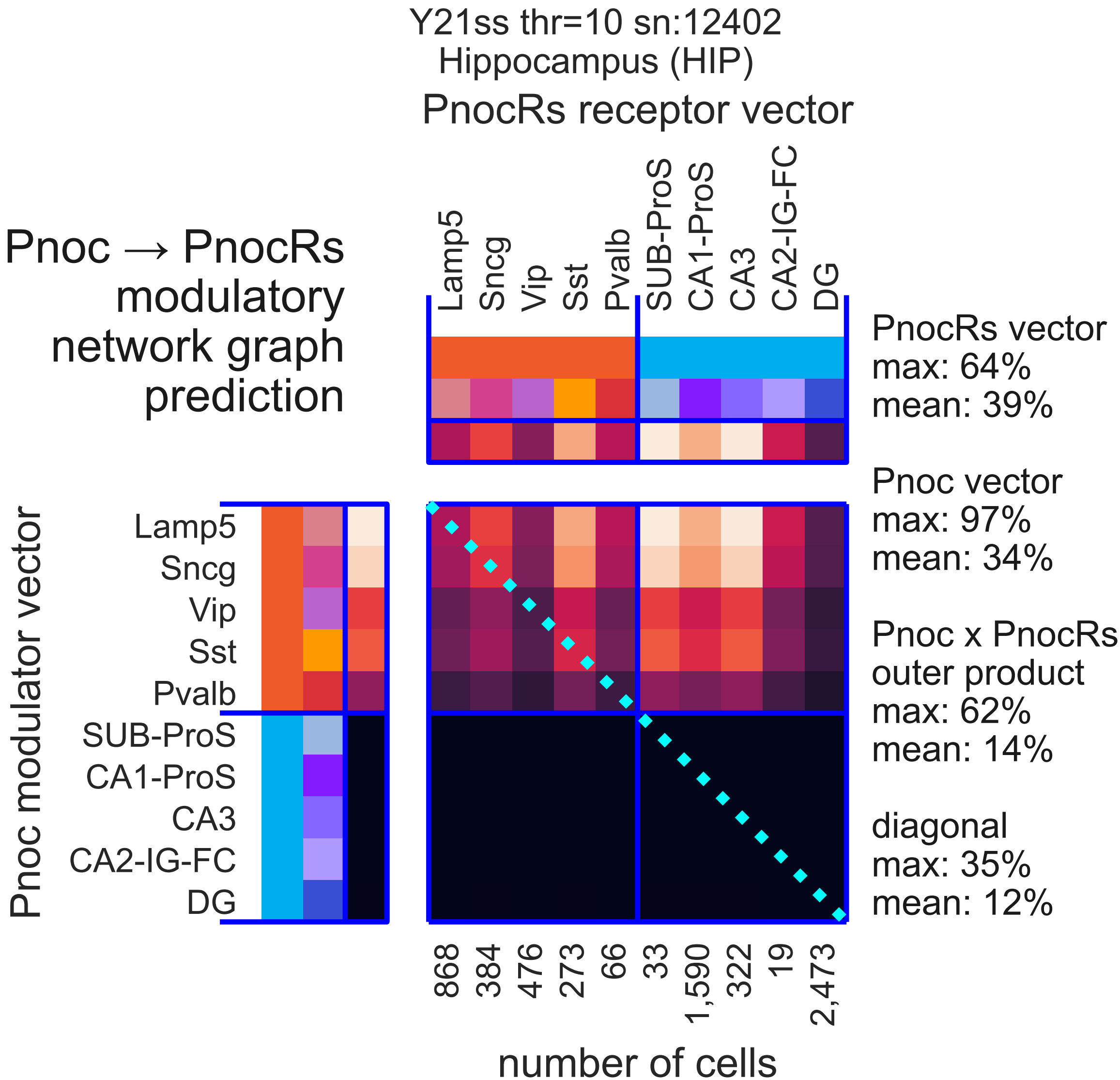


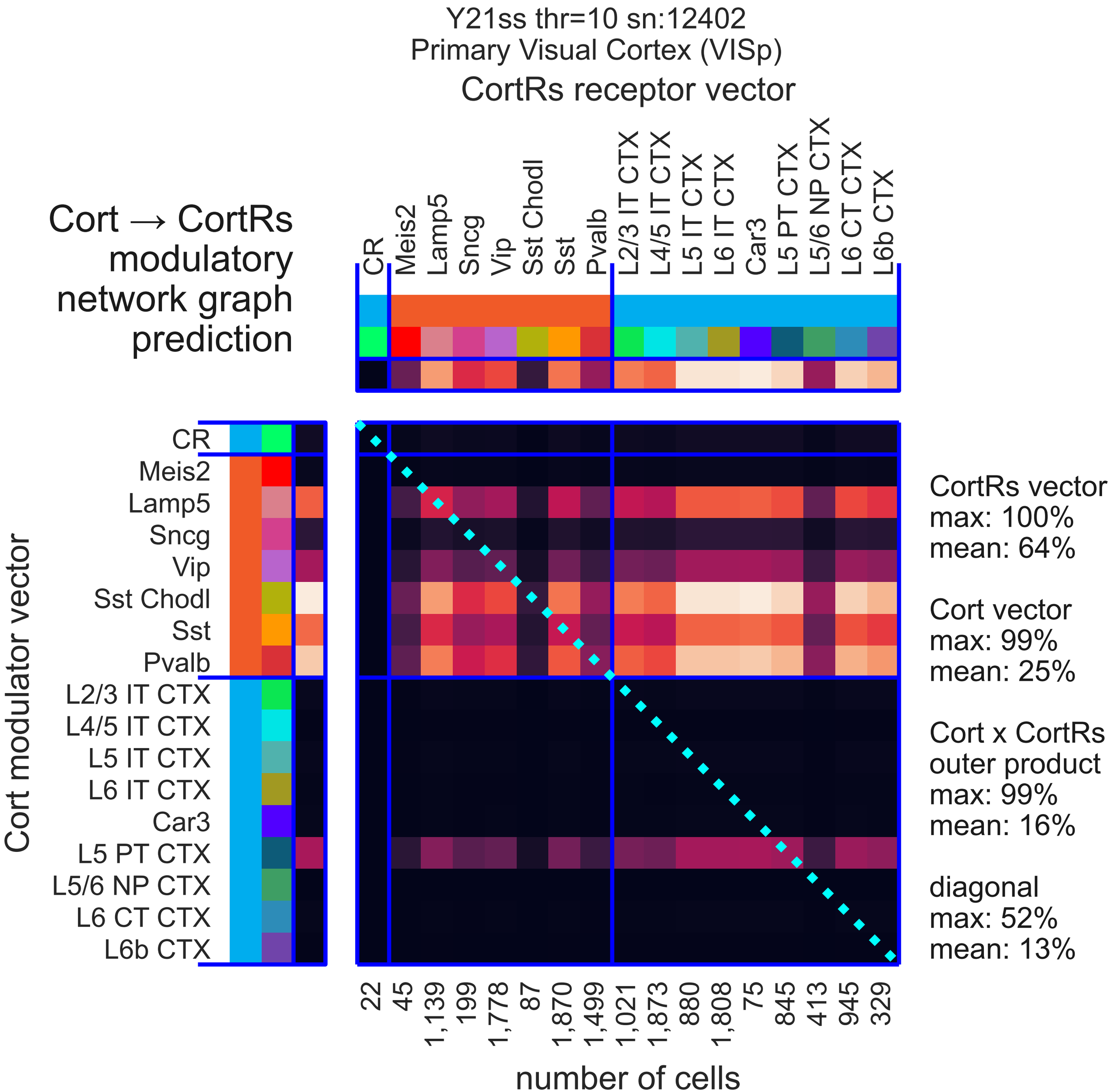
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

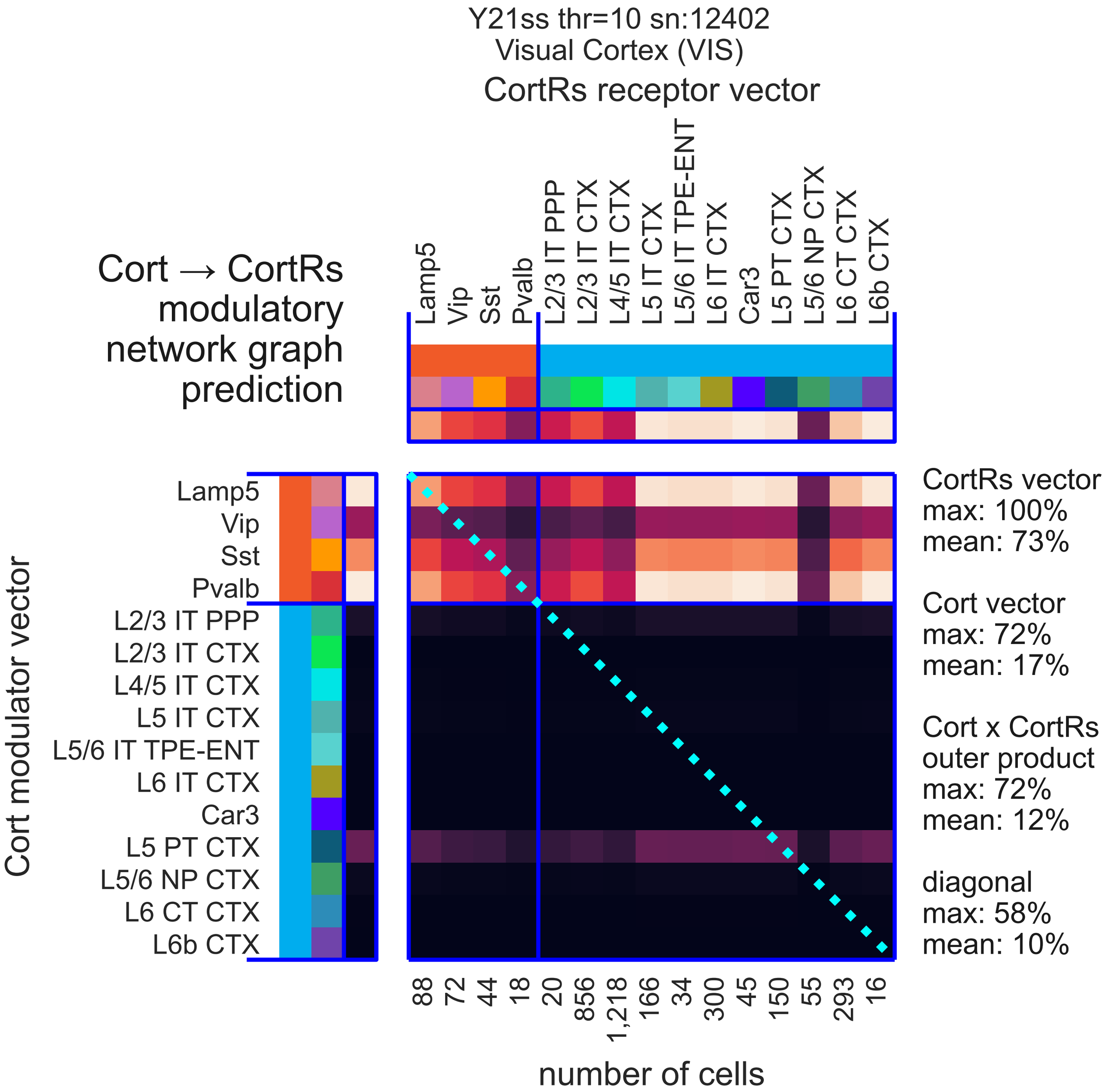


Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)

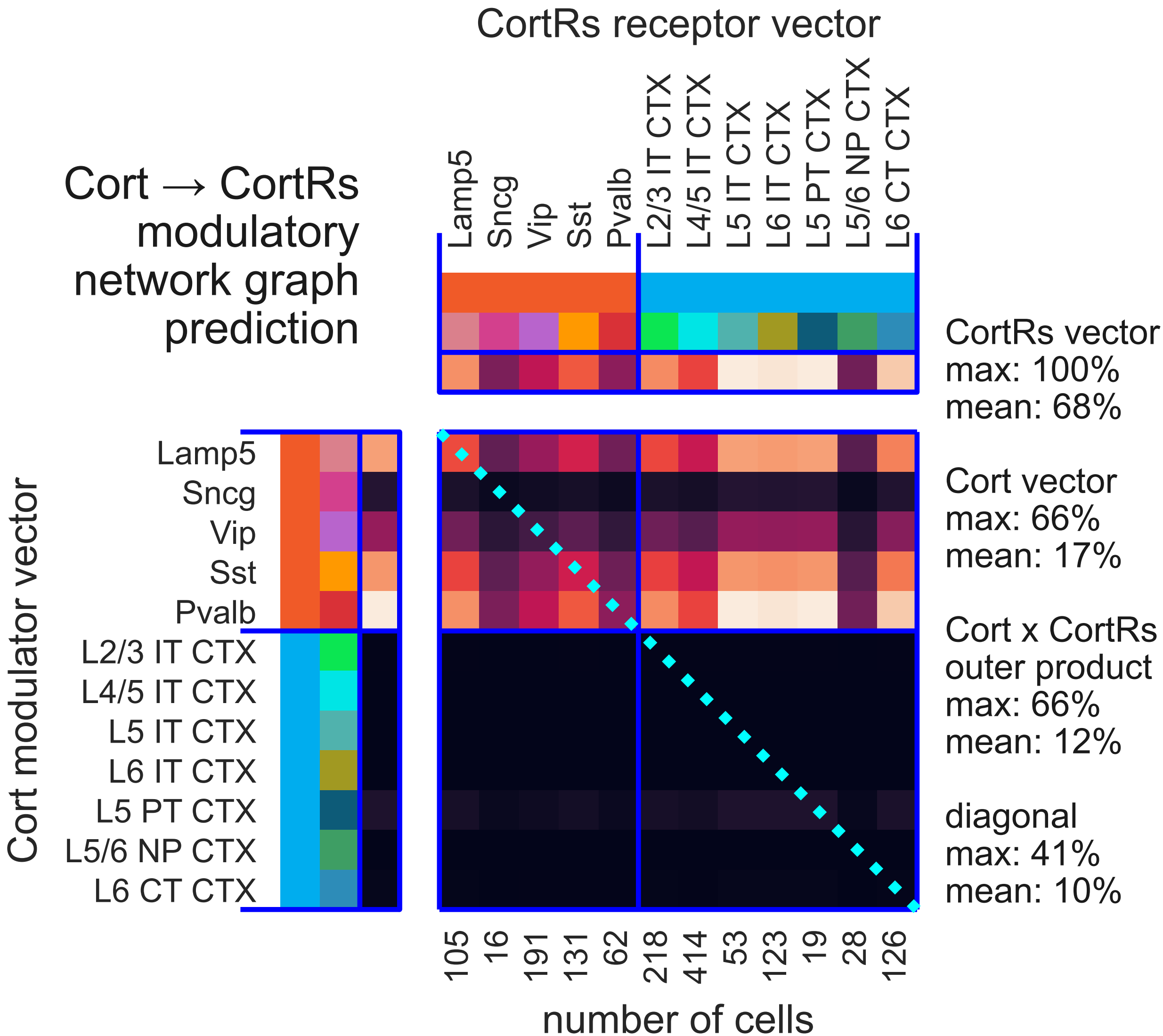


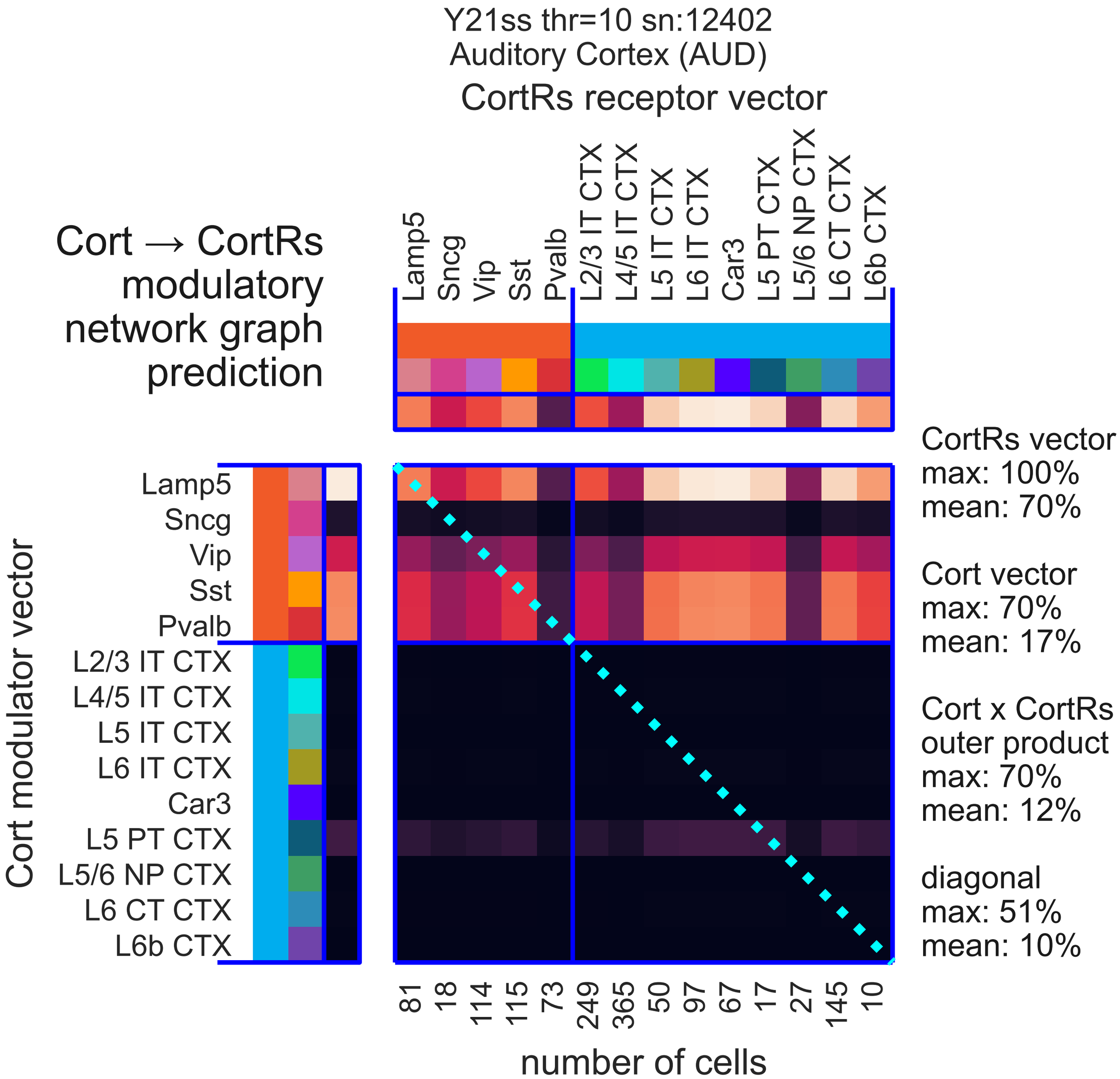

Y21ss thr=10 sn:12402
Hippocampus (HIP)
PnocRs receptor vector
Pnoc → PnocRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
SUB-ProS
CA1-ProS
CA3
CA2-IG-FC
DG
PnocRs vector
max: 64%
mean: 39%
Pnoc vector
max: 97%
mean: 34%
Pnoc x PnocRs
outer product
max: 62%
mean: 14%
diagonal
max: 35%
mean: 12%
Pnoc modulator vector
868
384
476
273
66
33
1,590
322
19
2,473
number of cells


Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
CortRs receptor vector
Cort → CortRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Cort modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
CortRs vector
max: 100%
mean: 64%
Cort vector
max: 99%
mean: 25%
Cort x CortRs
outer product
max: 99%
mean: 16%
diagonal
max: 52%
mean: 13%

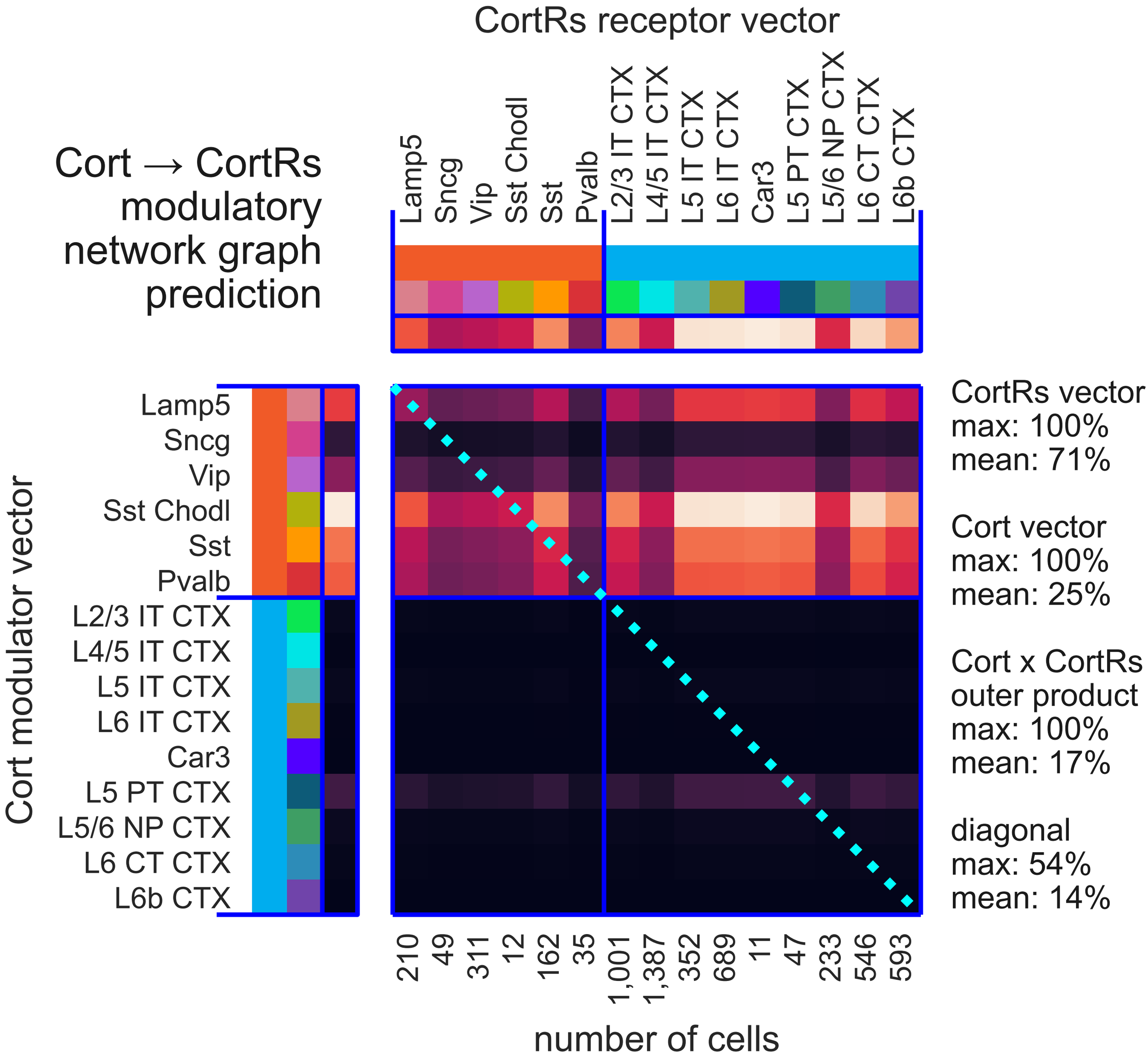

Y21ss thr=10 sn:12402
Visual Cortex (VIS)
CortRs receptor vector
Cort → CortRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Cort modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
CortRs vector
max: 100%
mean: 73%
Cort vector
max: 72%
mean: 17%
Cort x CortRs
outer product
max: 72%
mean: 12%
diagonal
max: 58%
mean: 10%

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)

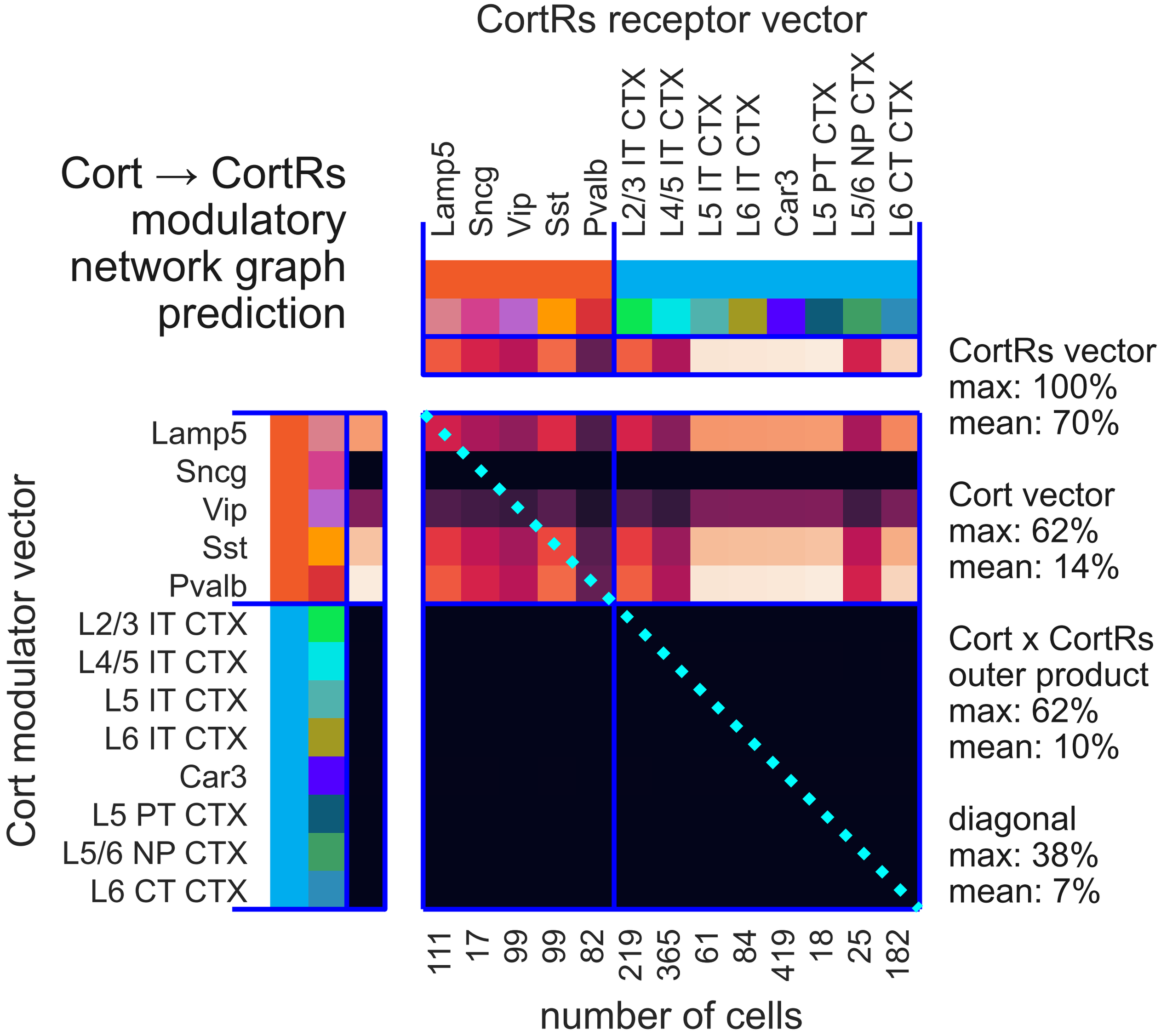



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)
CortRs receptor vector
Cort → CortRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Cort modulator vector
81
18
114
115
73
249
365
50
97
67
17
27
145
10
number of cells
CortRs vector
max: 100%
mean: 70%
Cort vector
max: 70%
mean: 17%
Cort x CortRs
outer product
max: 70%
mean: 12%
diagonal
max: 51%
mean: 10%

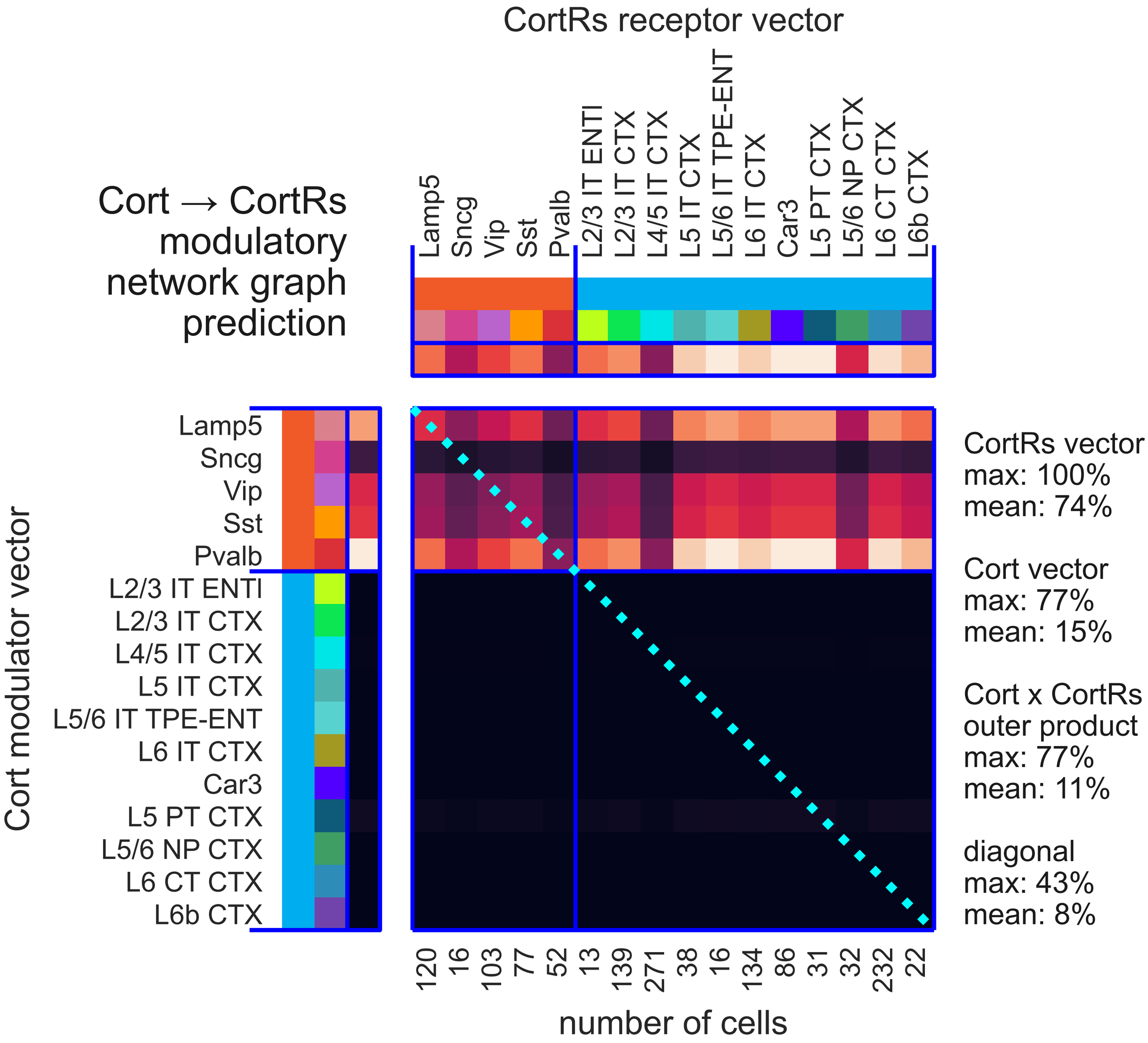
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



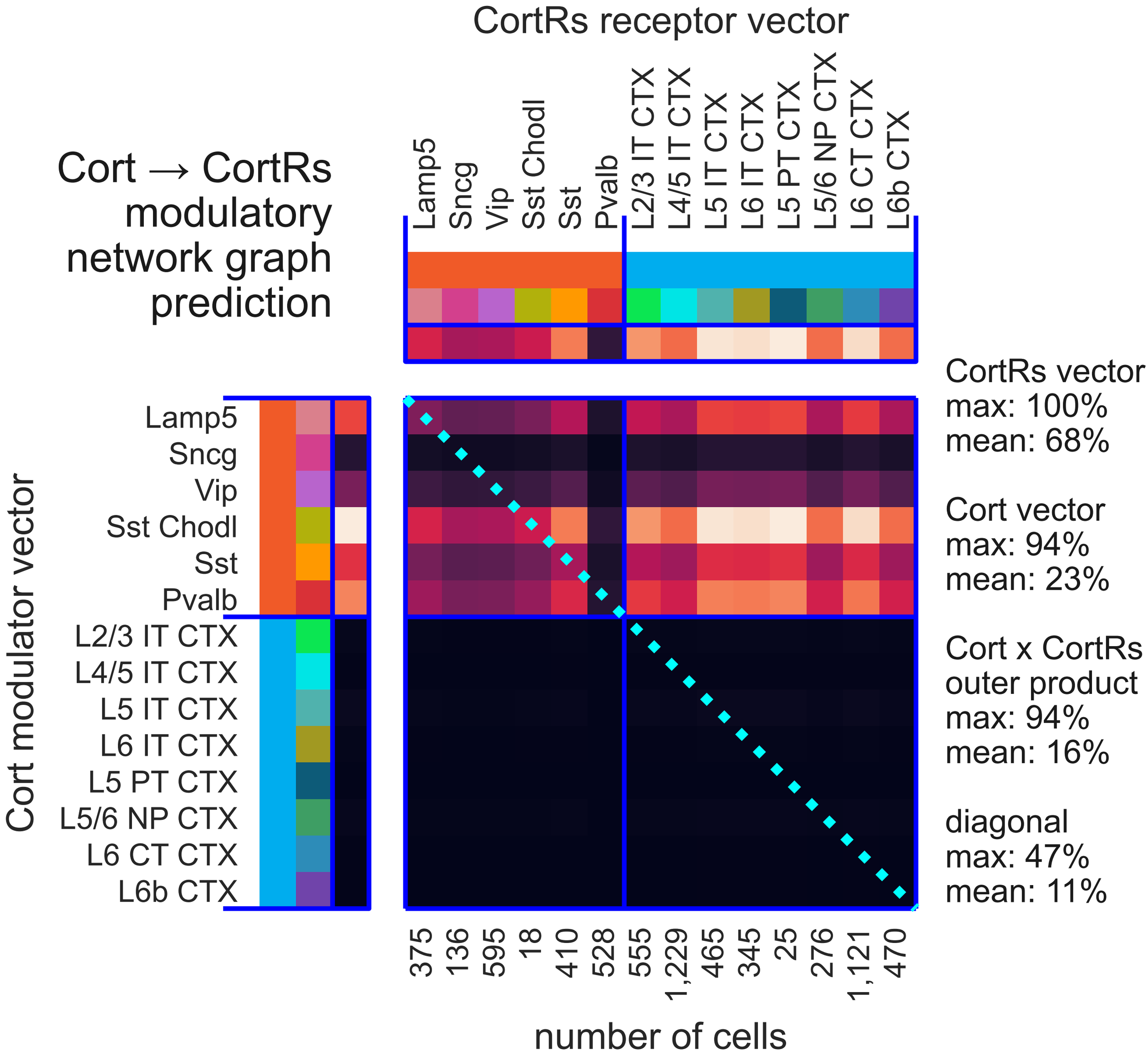
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



Y21ss thr=10 sn:12402
Gustatory Cortex (GU)



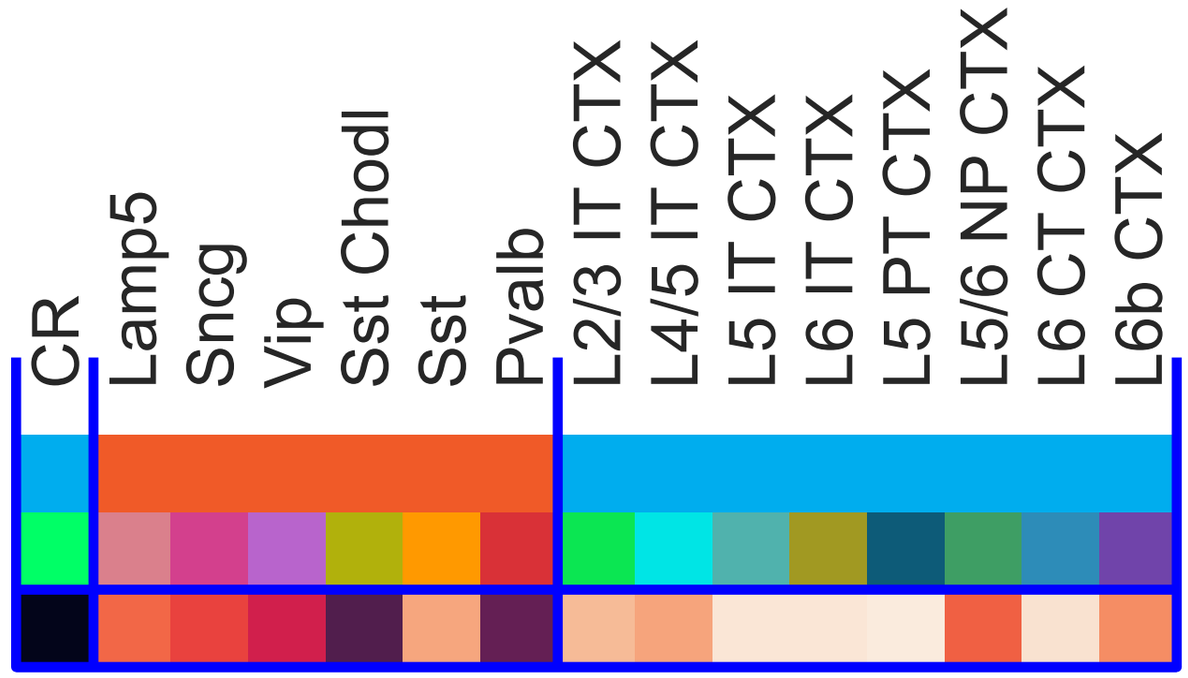
Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)

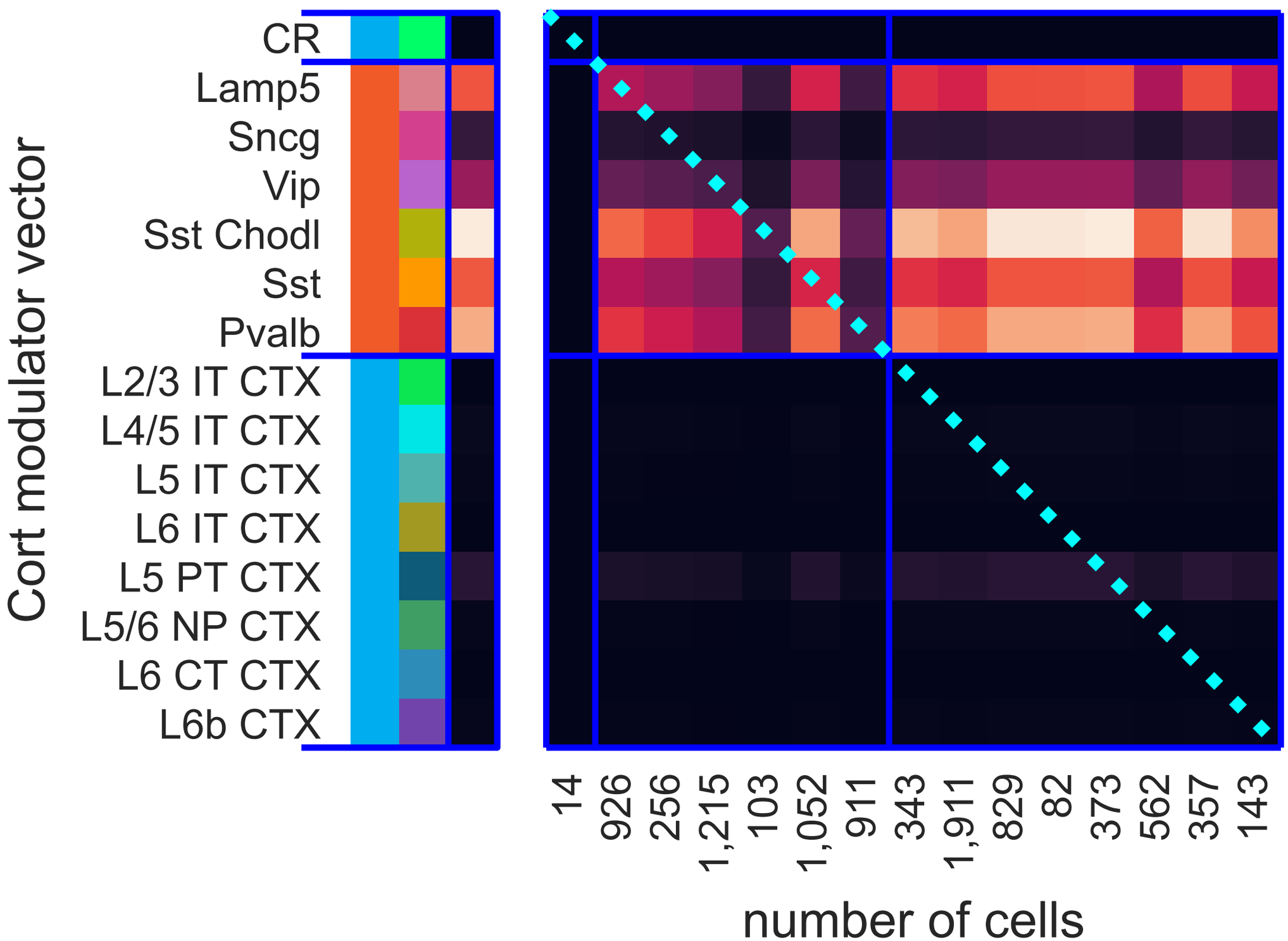


Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

CortRs receptor vector

Cort → CortRs
modulatory
network graph
prediction





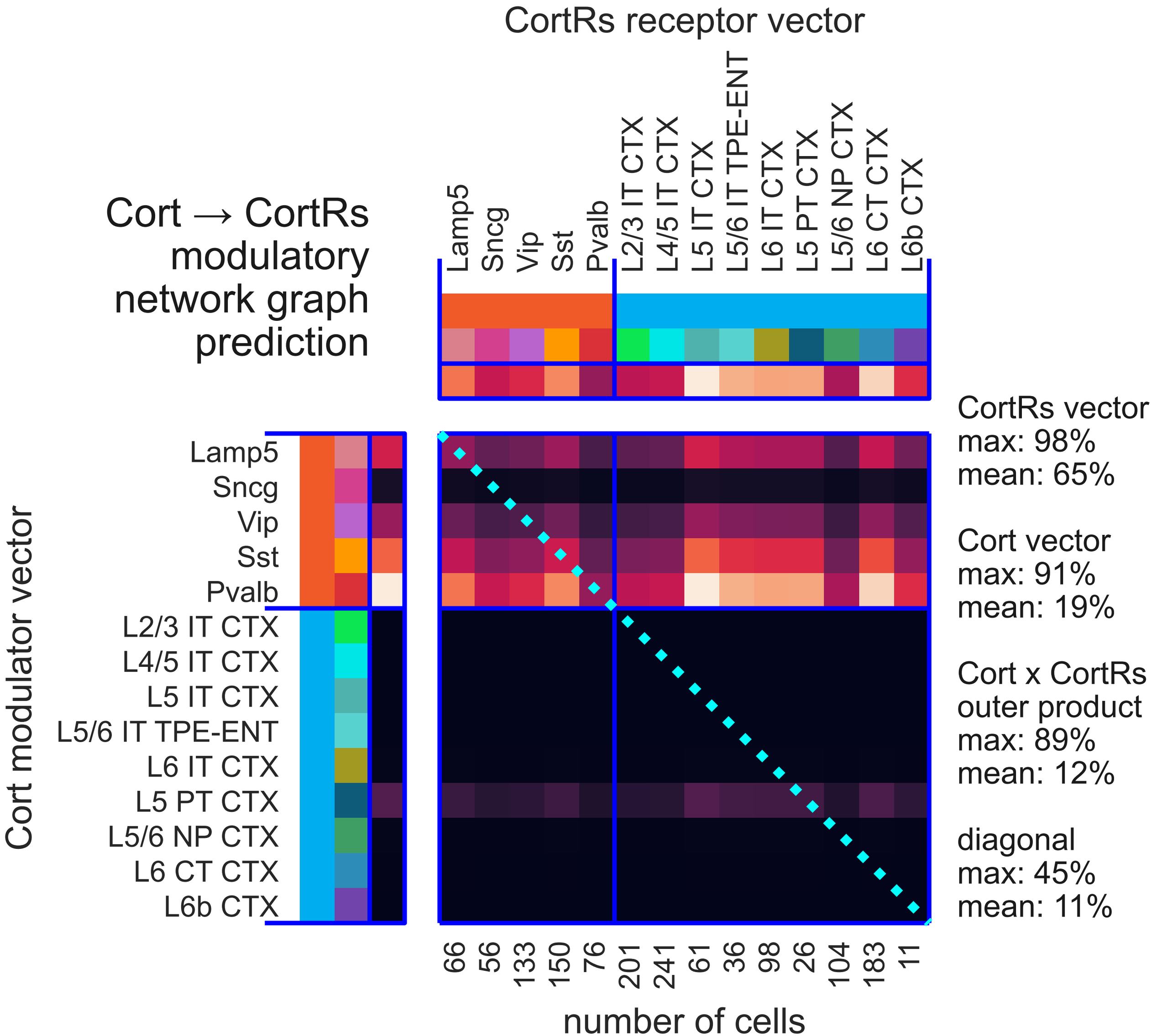
CortRs vector
max: 100%
mean: 68%

Cort vector
max: 99%
mean: 25%

Cort x CortRs
outer product
max: 99%
mean: 17%

diagonal
max: 53%
mean: 12%

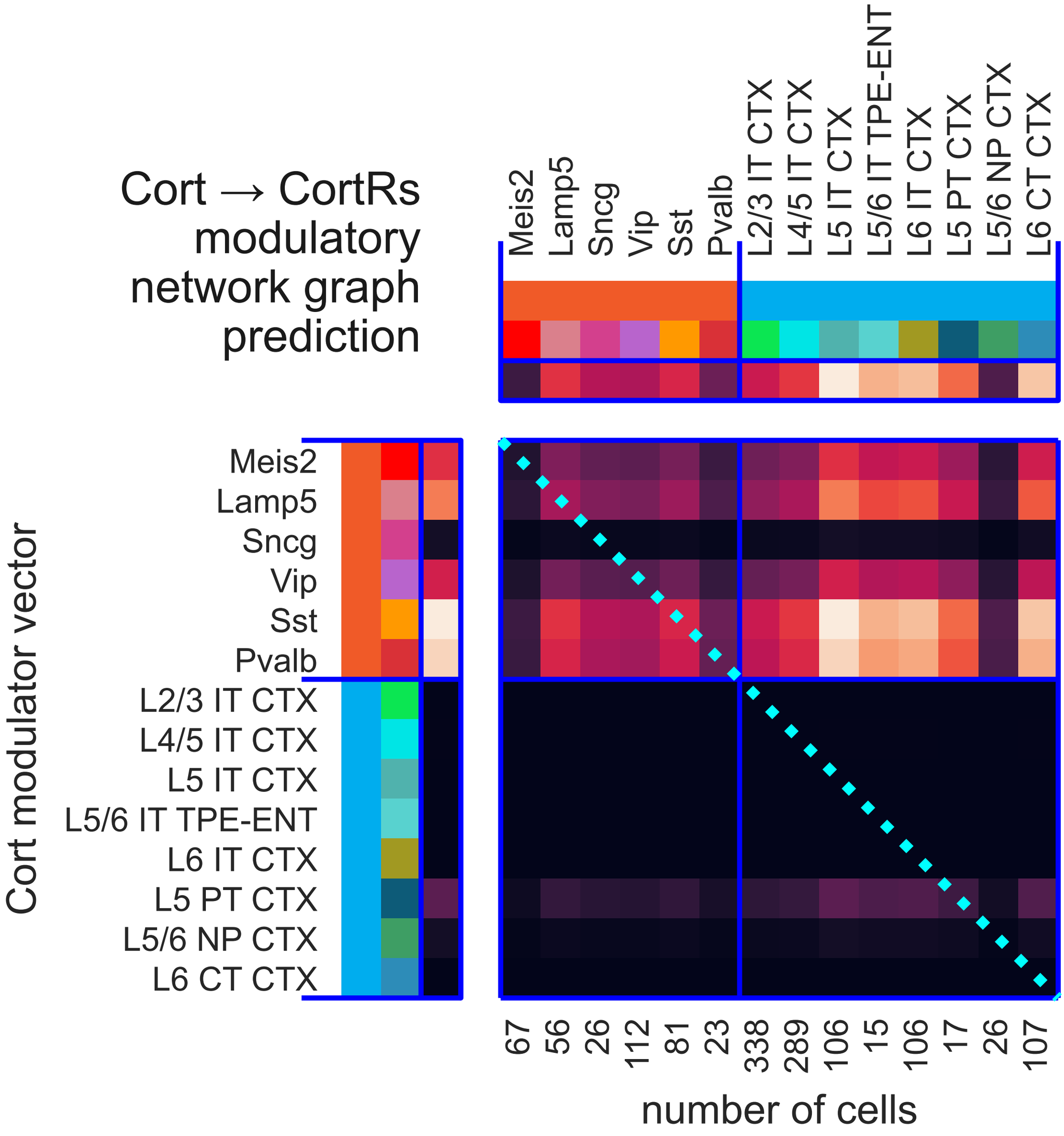
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)



Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

CortRs receptor vector

Cort → CortRs
modulatory
network graph
prediction



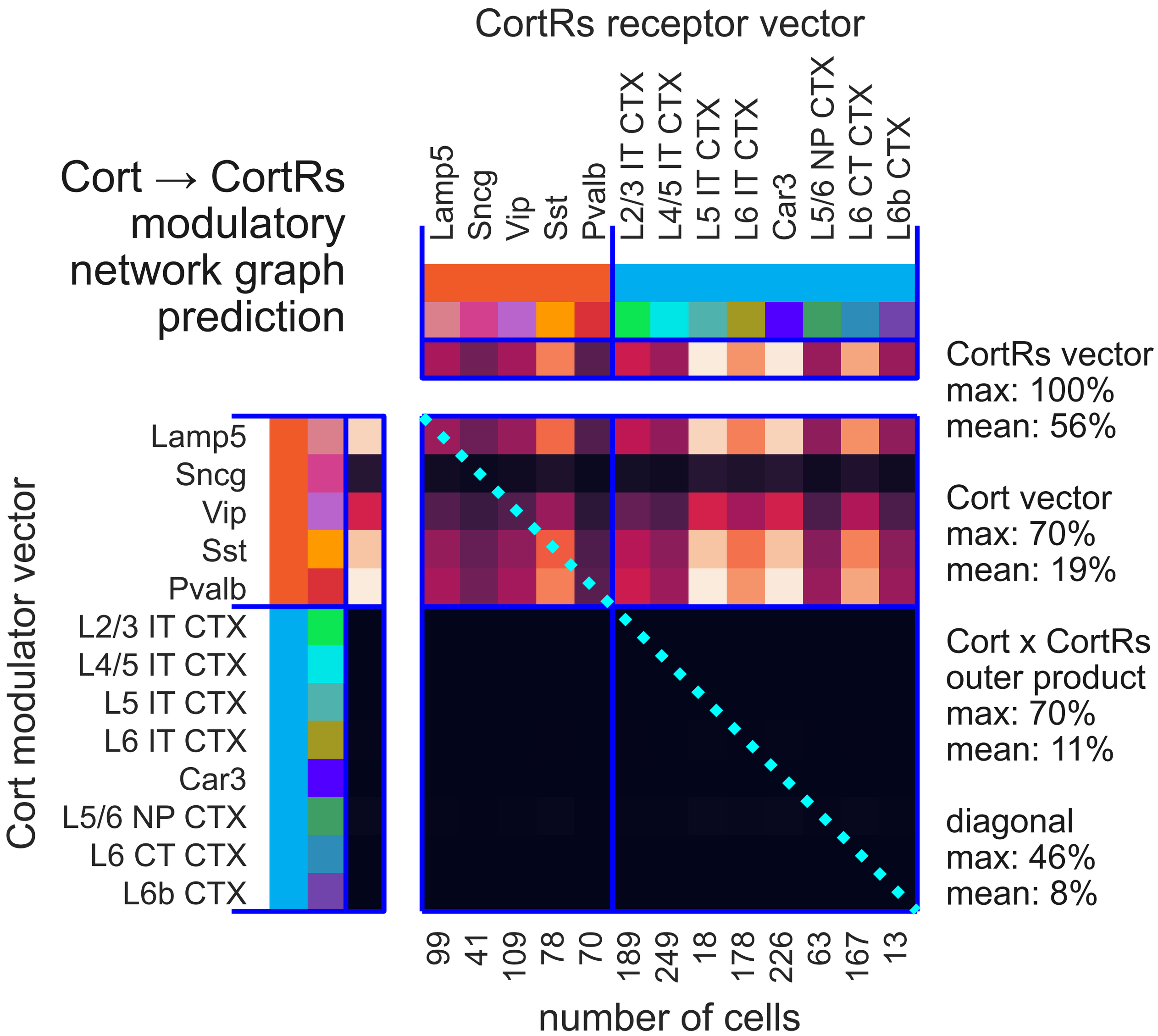
CortRs vector
max: 94%
mean: 54%

Cort vector
max: 74%
mean: 22%

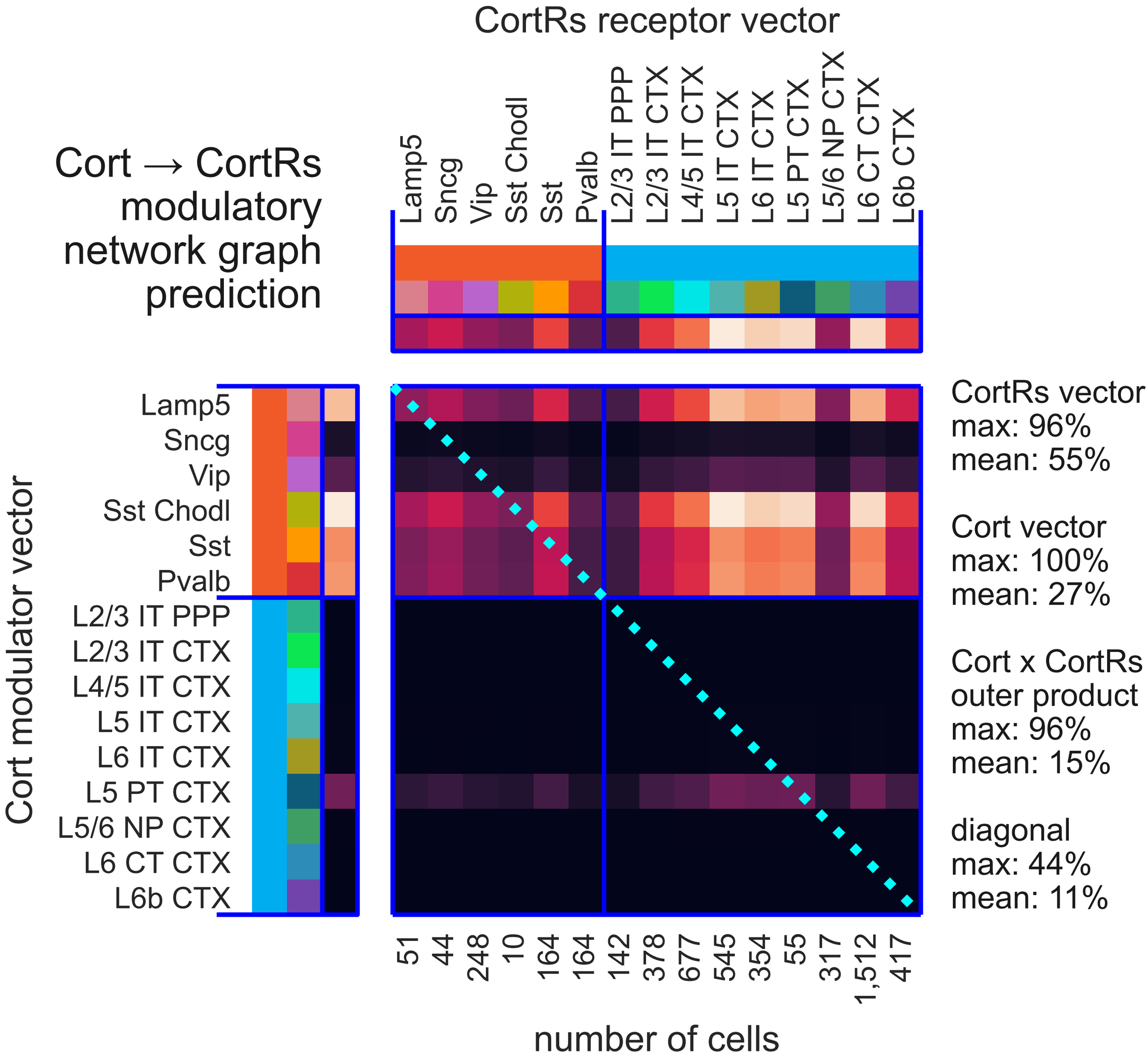
Cort x CortRs
outer product
max: 70%
mean: 12%

diagonal
max: 37%
mean: 9%

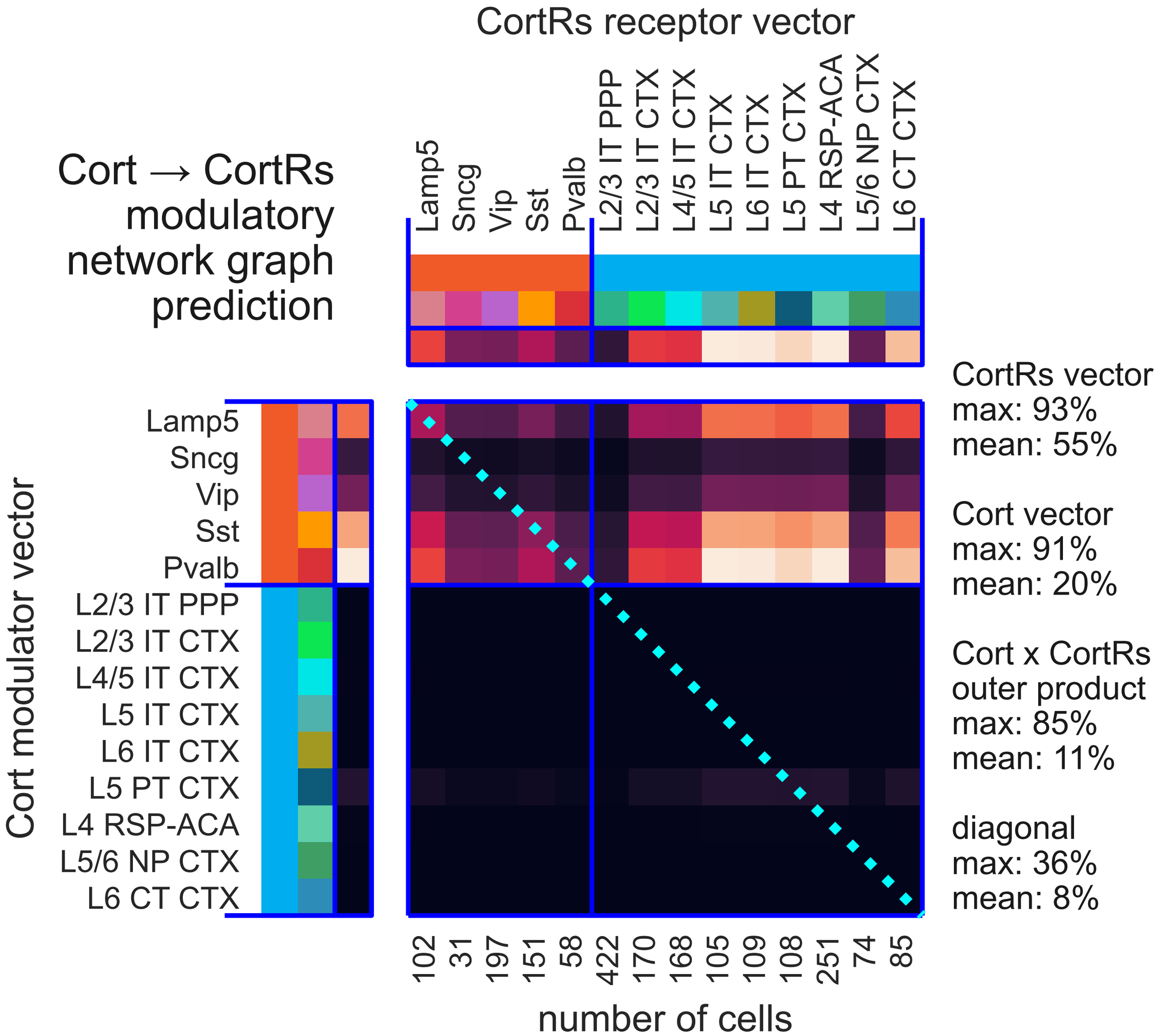
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



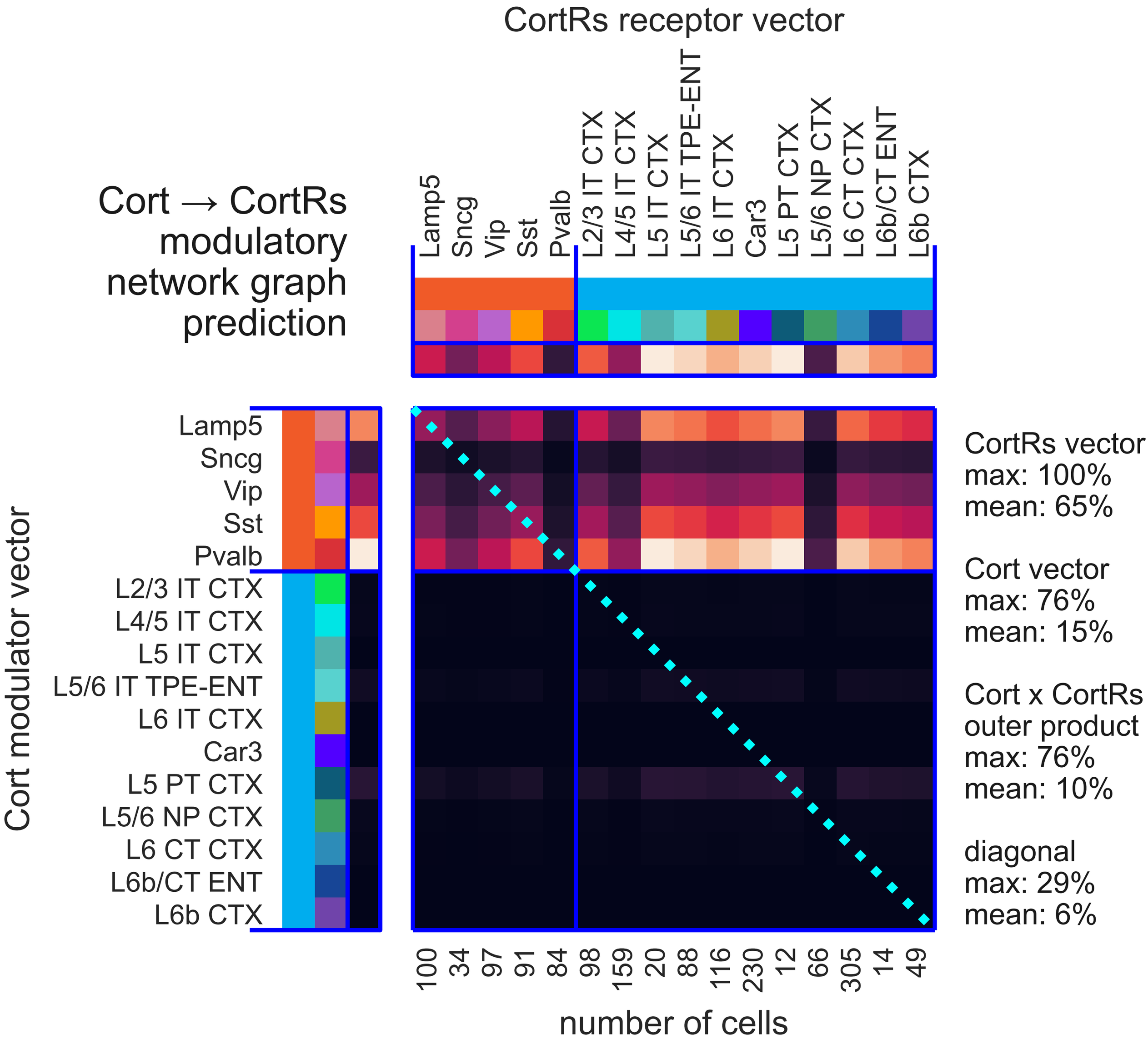
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)



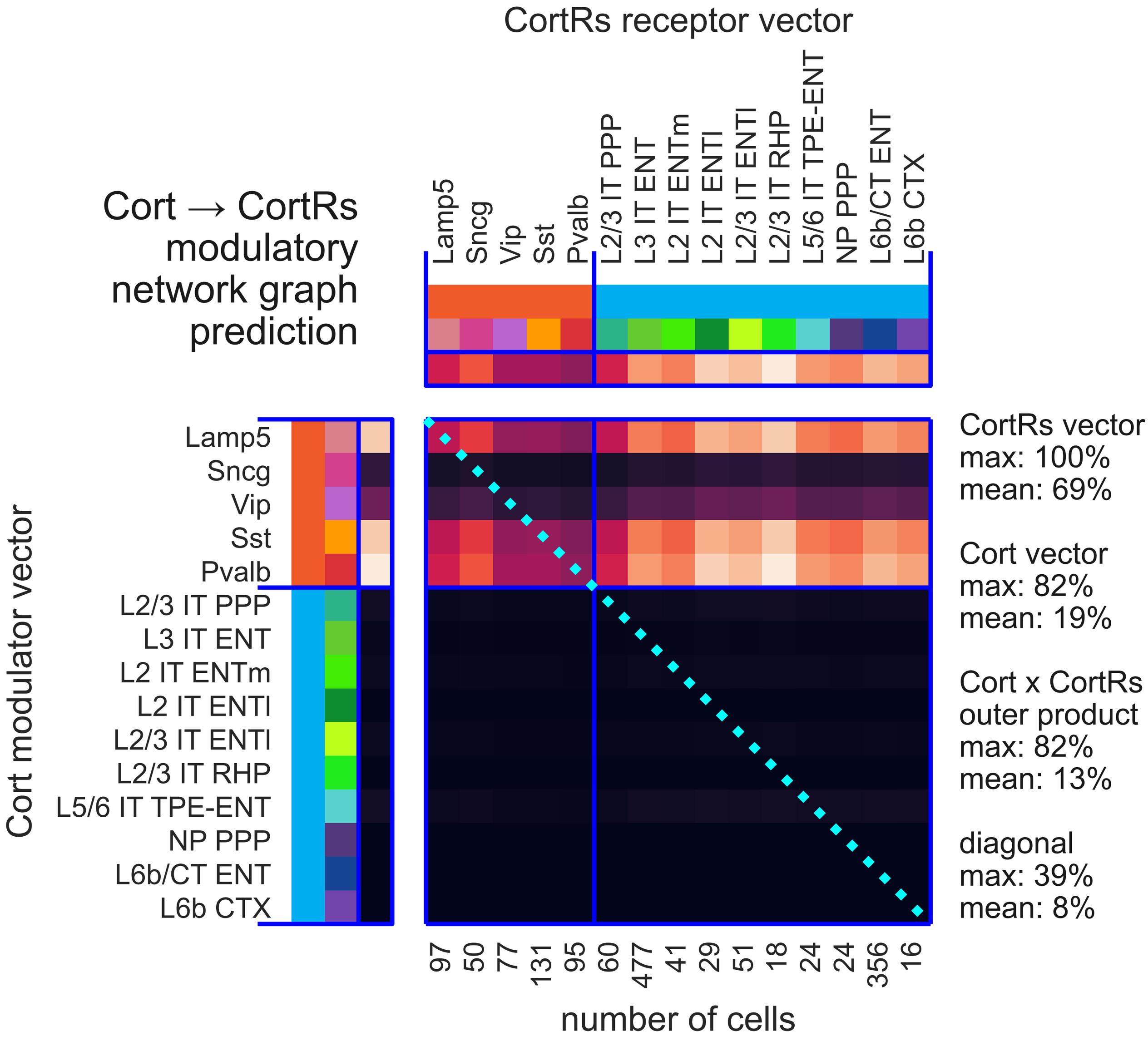
Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)

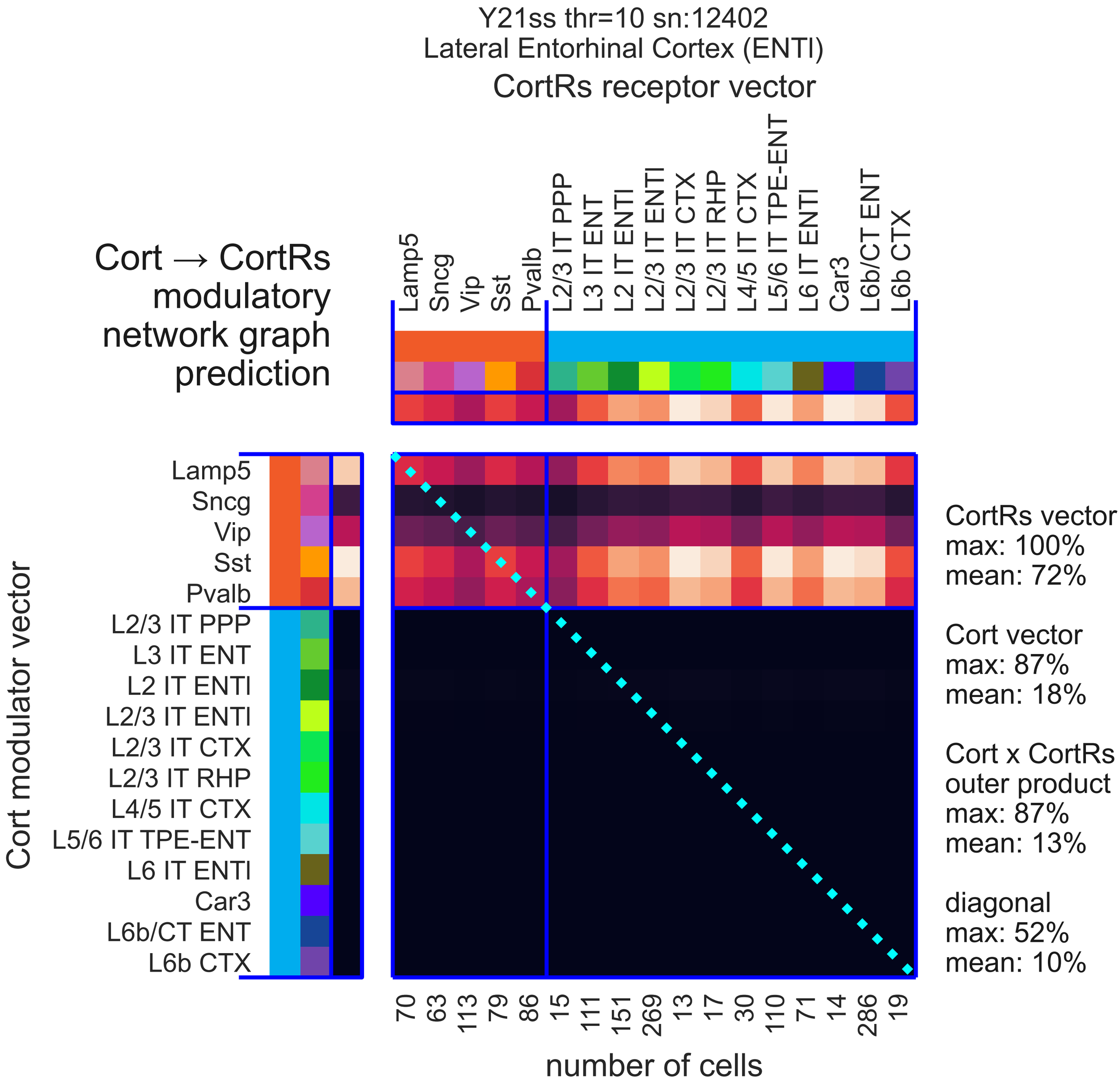


Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

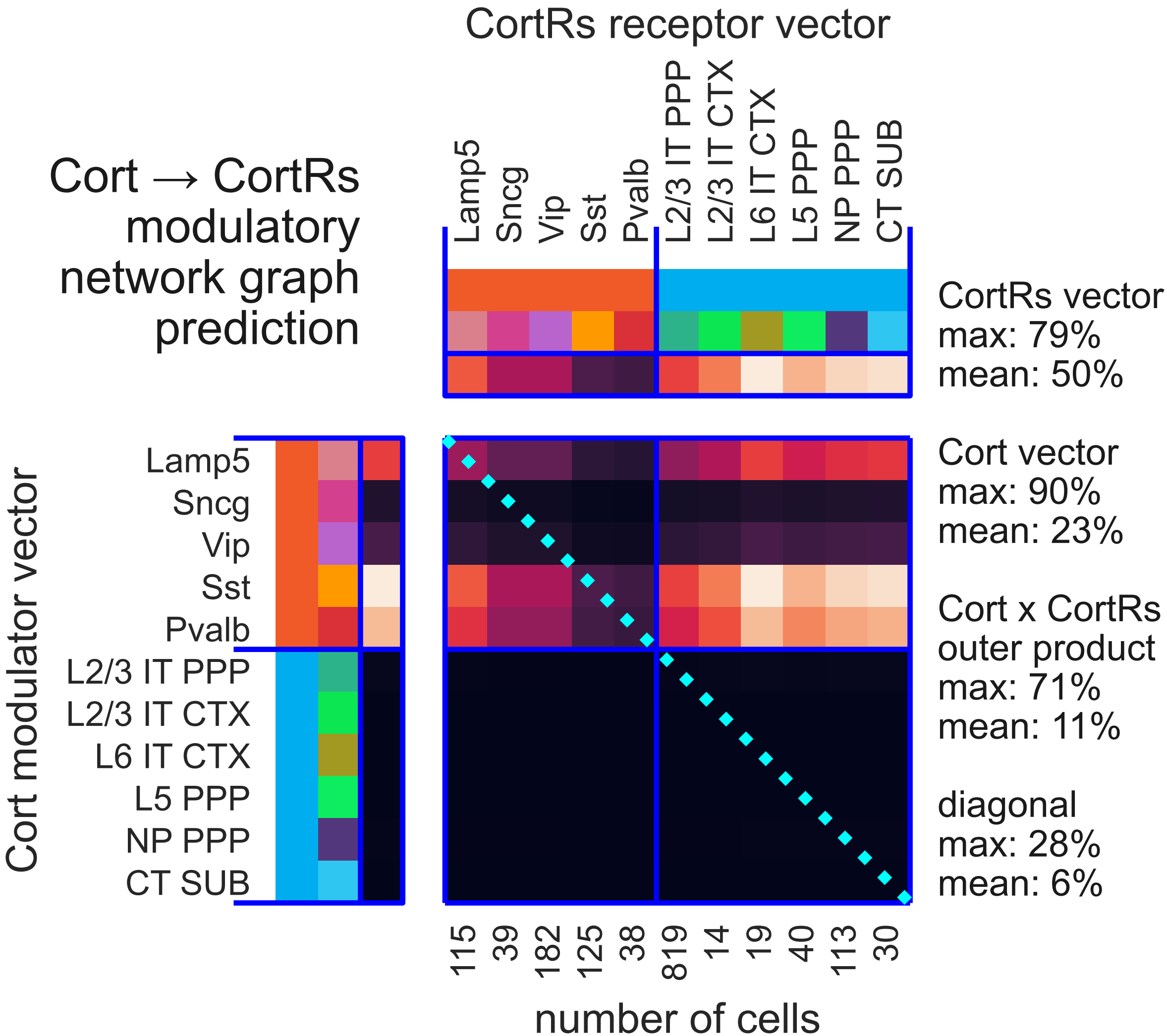


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

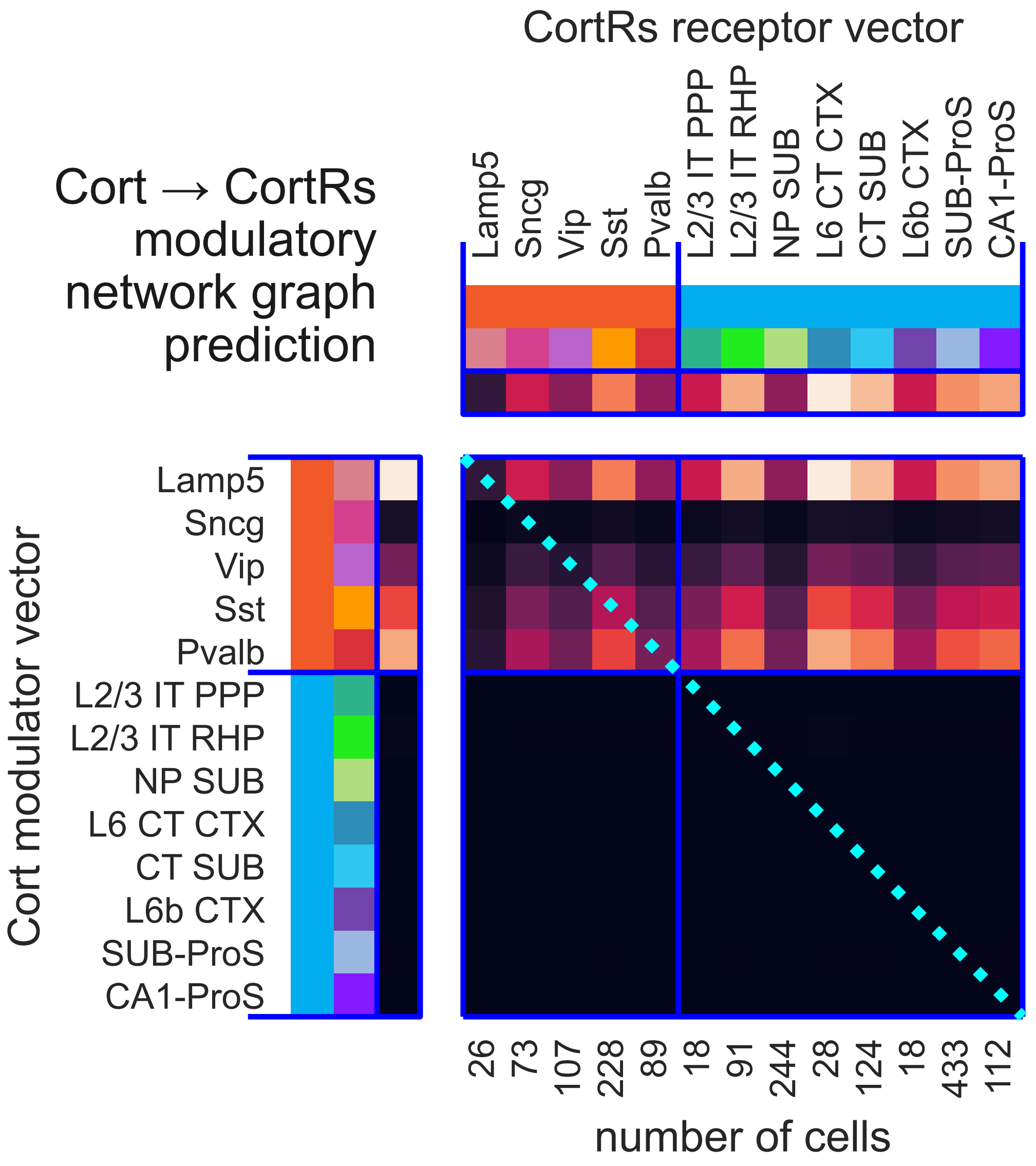



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
CortRs receptor vector
Cort → CortRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Cort modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
CortRs vector
max: 100%
mean: 72%
Cort vector
max: 87%
mean: 18%
Cort x CortRs
outer product
max: 87%
mean: 13%
diagonal
max: 52%
mean: 10%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



CortRs vector
max: 89%
mean: 53%

Cort vector
max: 92%
mean: 20%

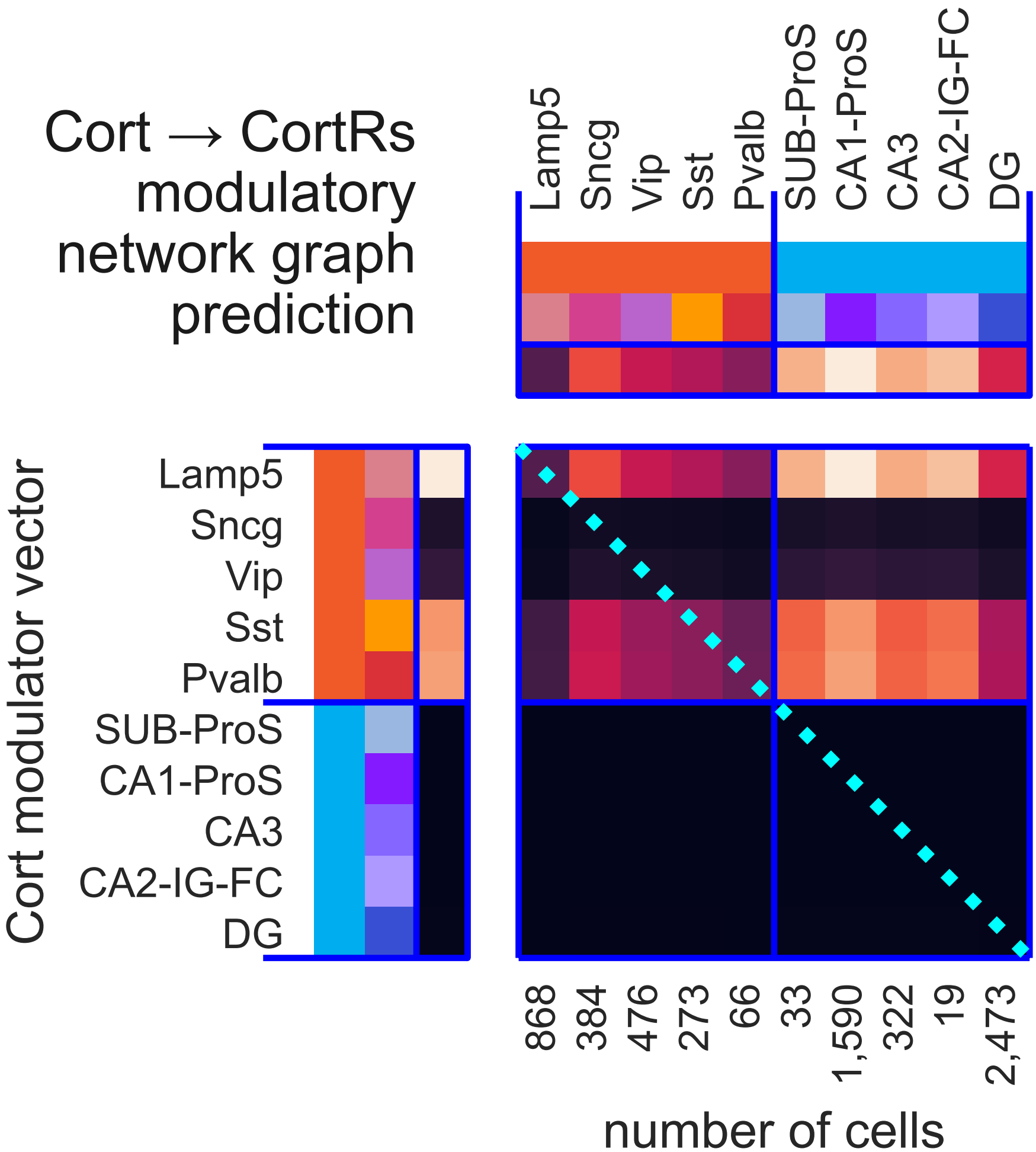
Cort x CortRs
outer product
max: 82%
mean: 11%

diagonal
max: 37%
mean: 6%

Y21ss thr=10 sn:12402
Hippocampus (HIP)

CortRs receptor vector

Cort → CortRs
modulatory
network graph
prediction



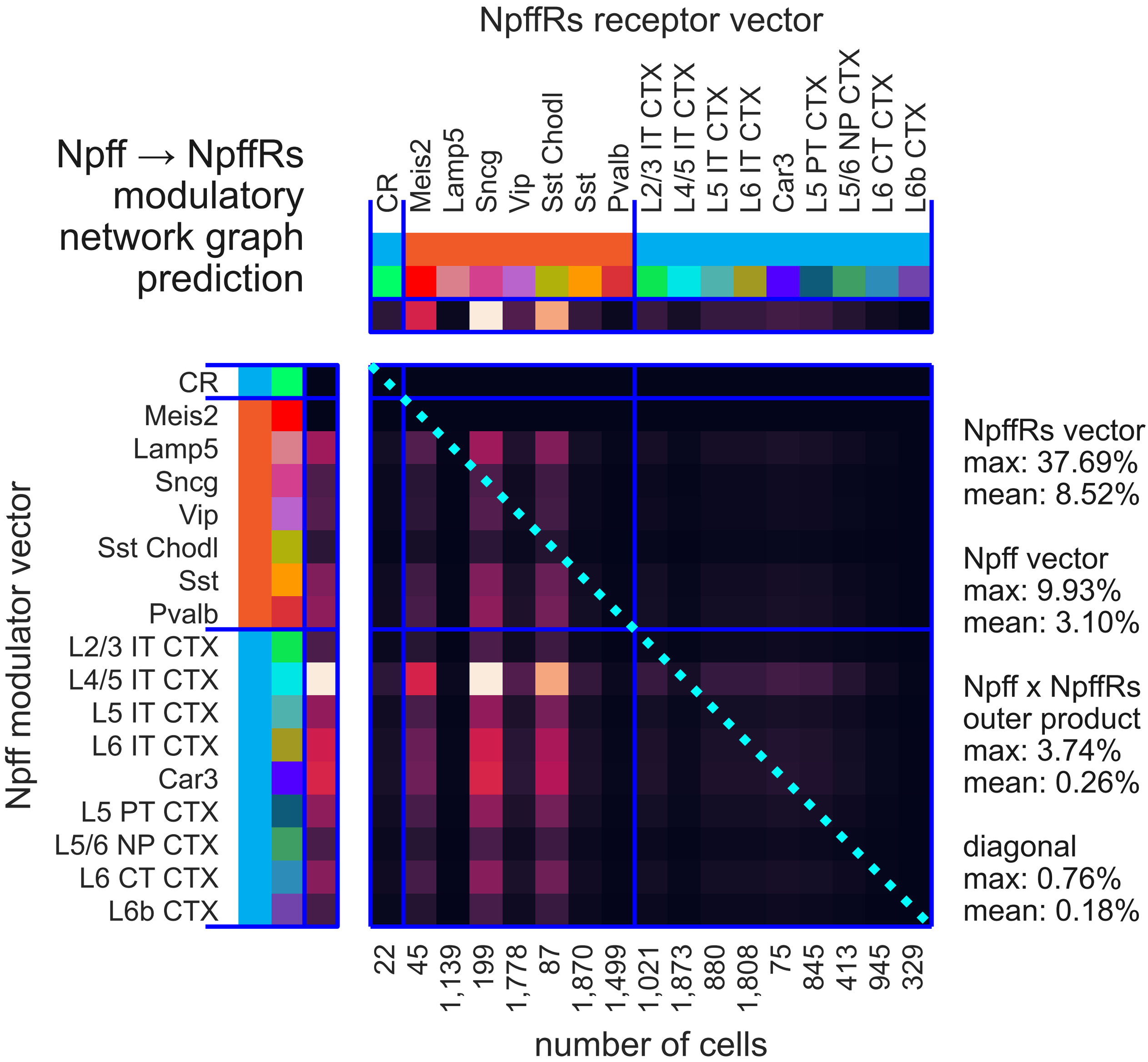
CortRs vector
max: 89%
mean: 55%

Cort vector
max: 77%
mean: 22%

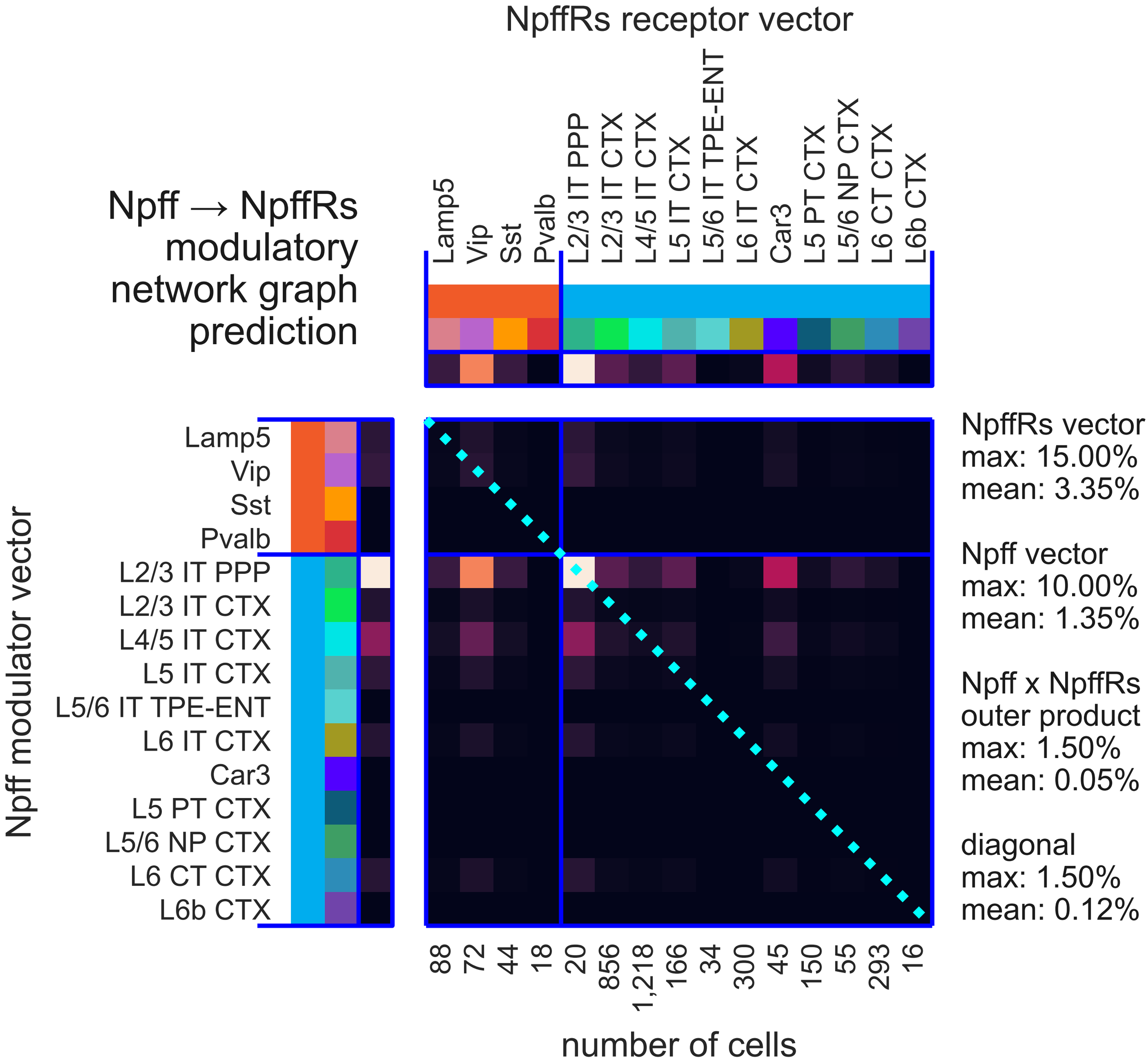
Cort x CortRs
outer product
max: 69%
mean: 12%

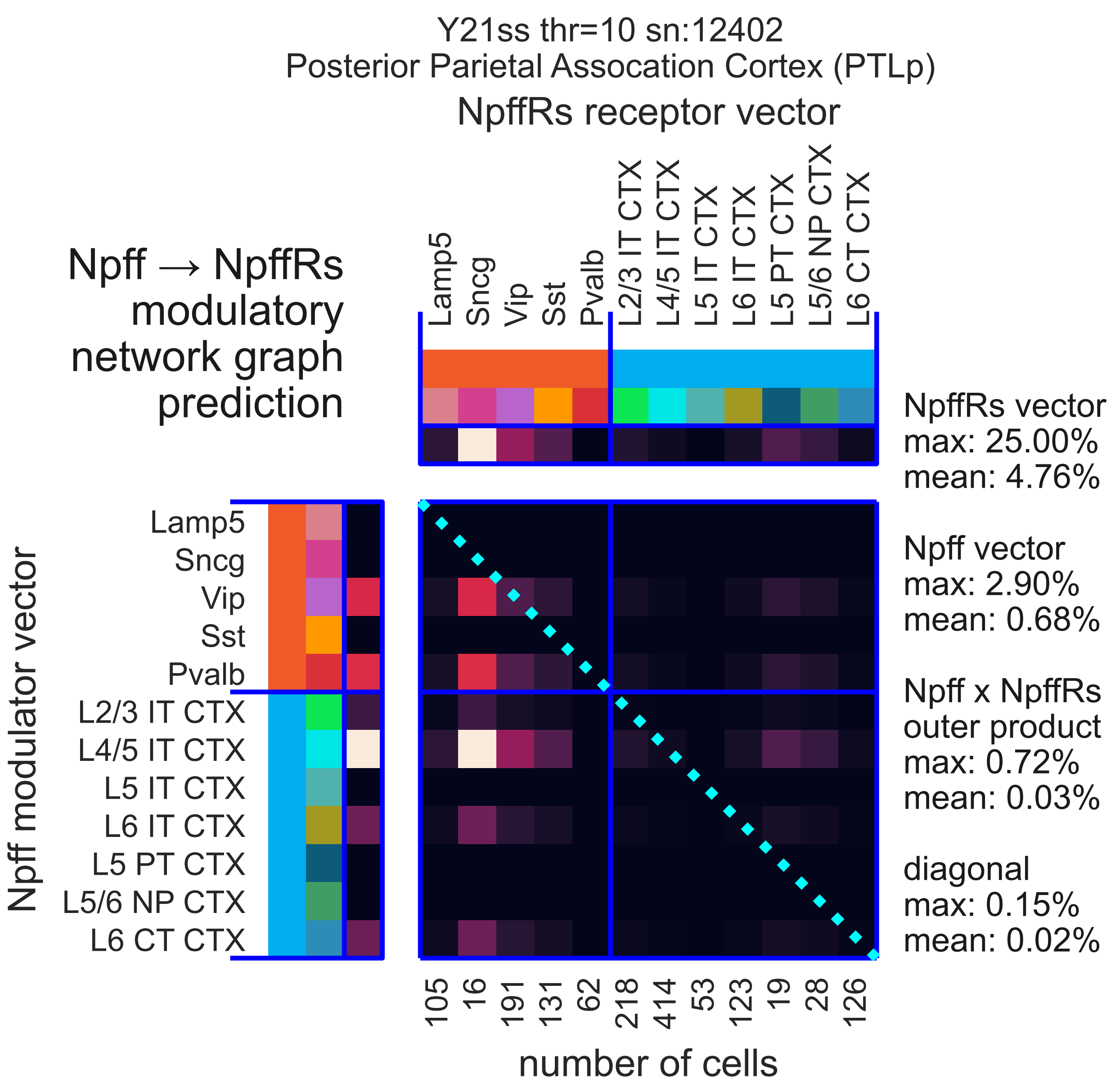
diagonal
max: 24%
mean: 7%

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)

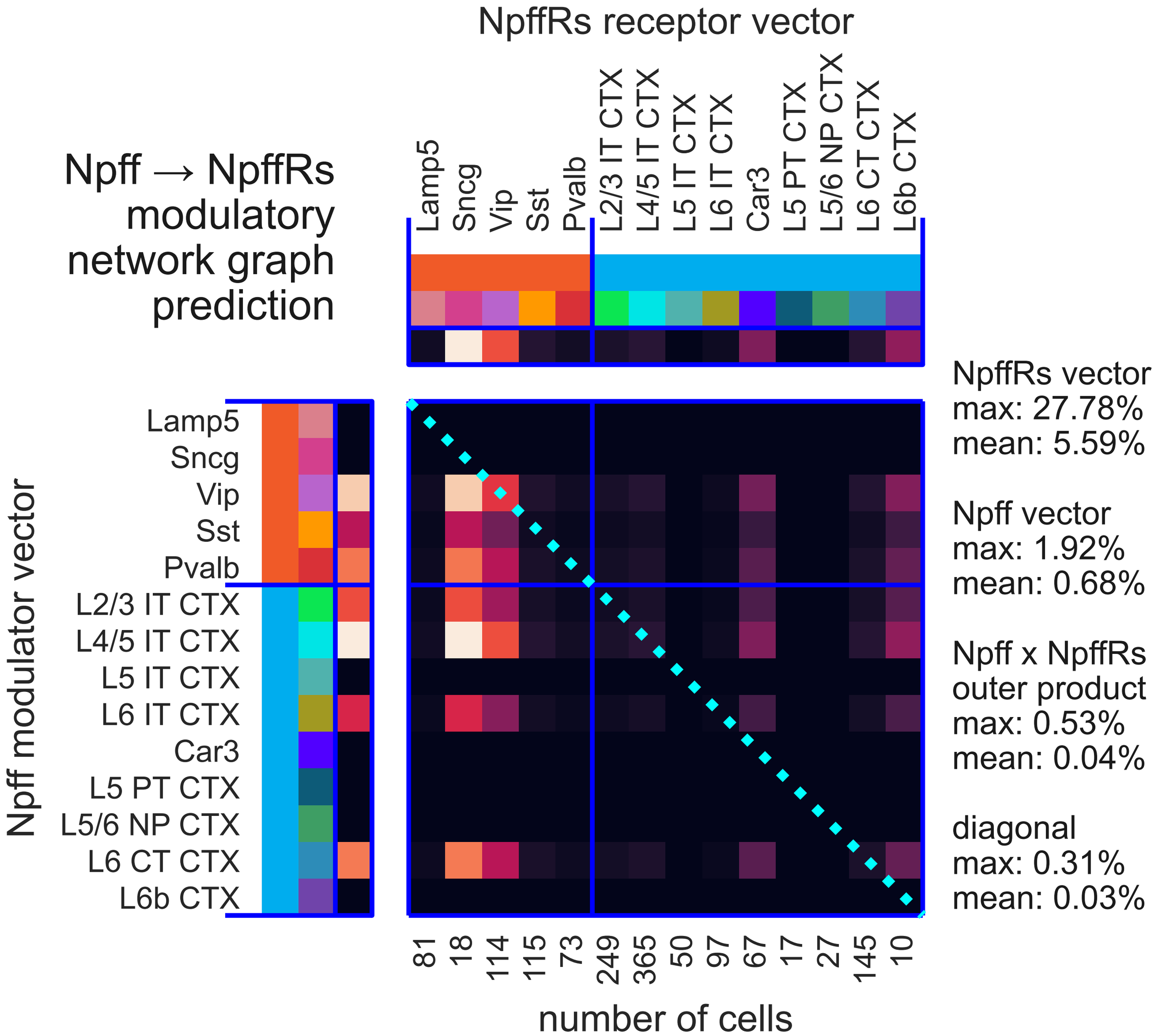


Y21ss thr=10 sn:12402
Visual Cortex (VIS)

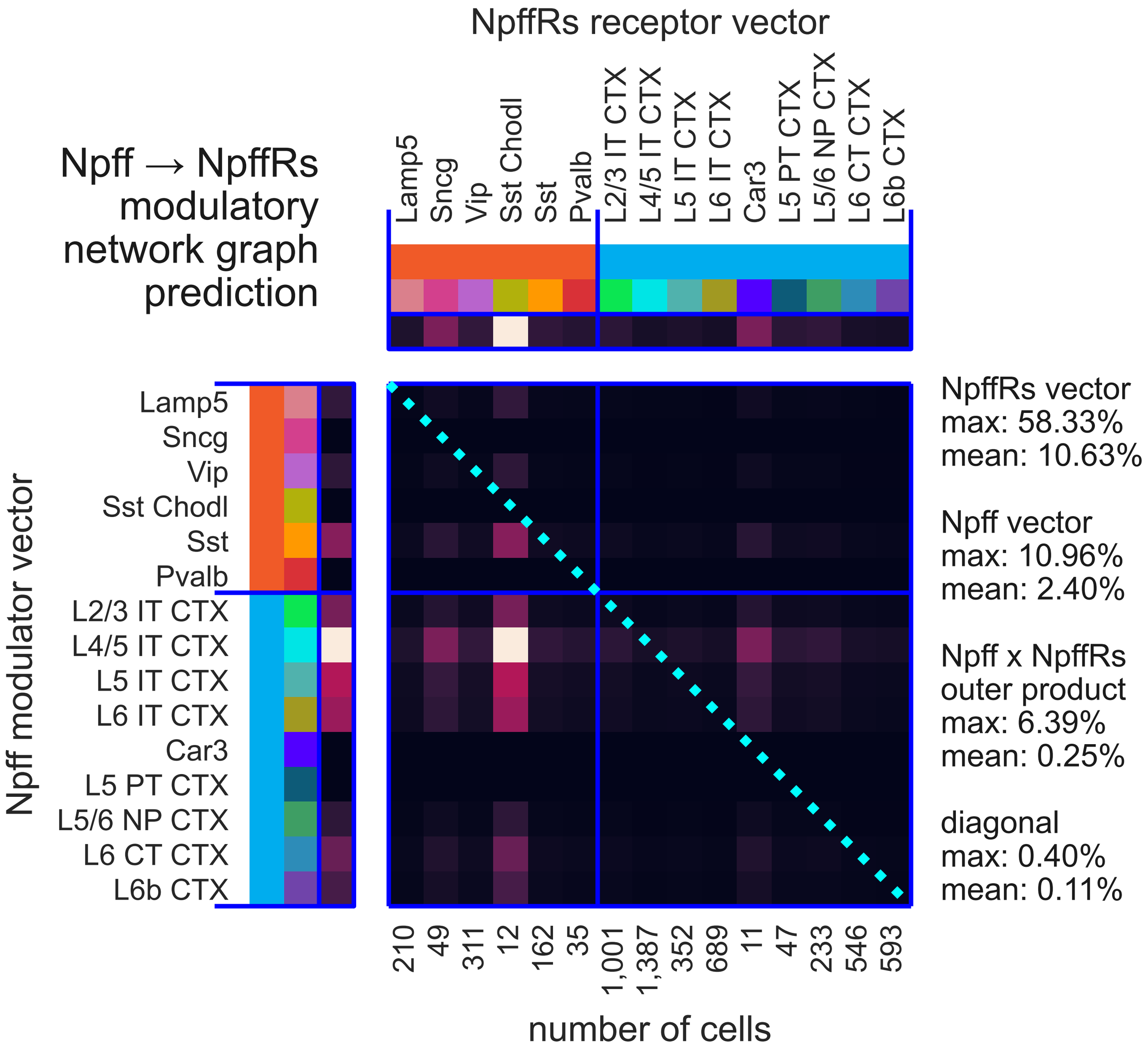


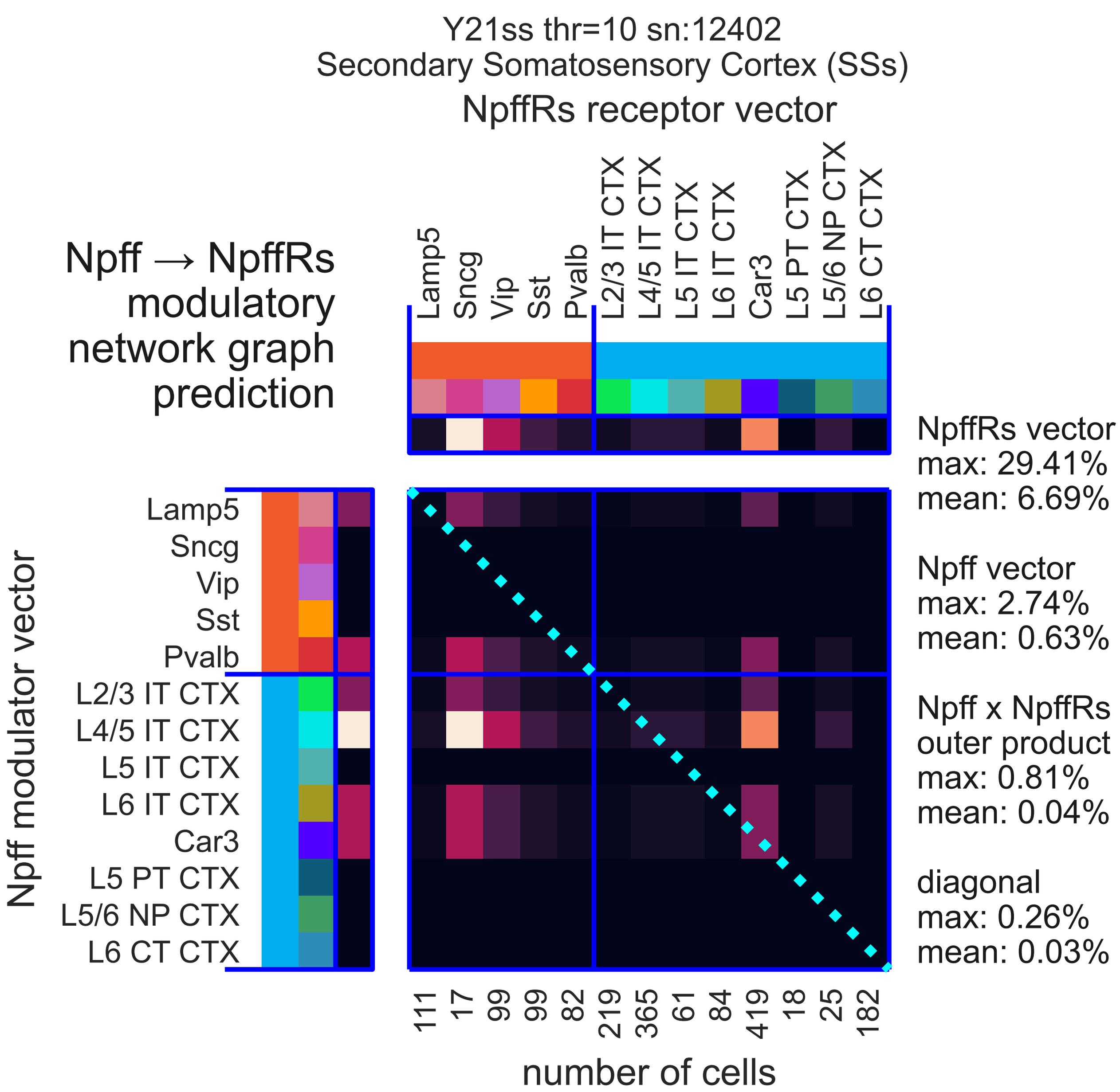

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)
NpffRs receptor vector
Npff → NpffRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
NpffRs vector
max: 25.00%
mean: 4.76%
Npff vector
max: 2.90%
mean: 0.68%
Npff x NpffRs
outer product
max: 0.72%
mean: 0.03%
diagonal
max: 0.15%
mean: 0.02%
Npff modulator vector
105
16
191
131
62
218
414
53
123
19
28
126
number of cells

Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

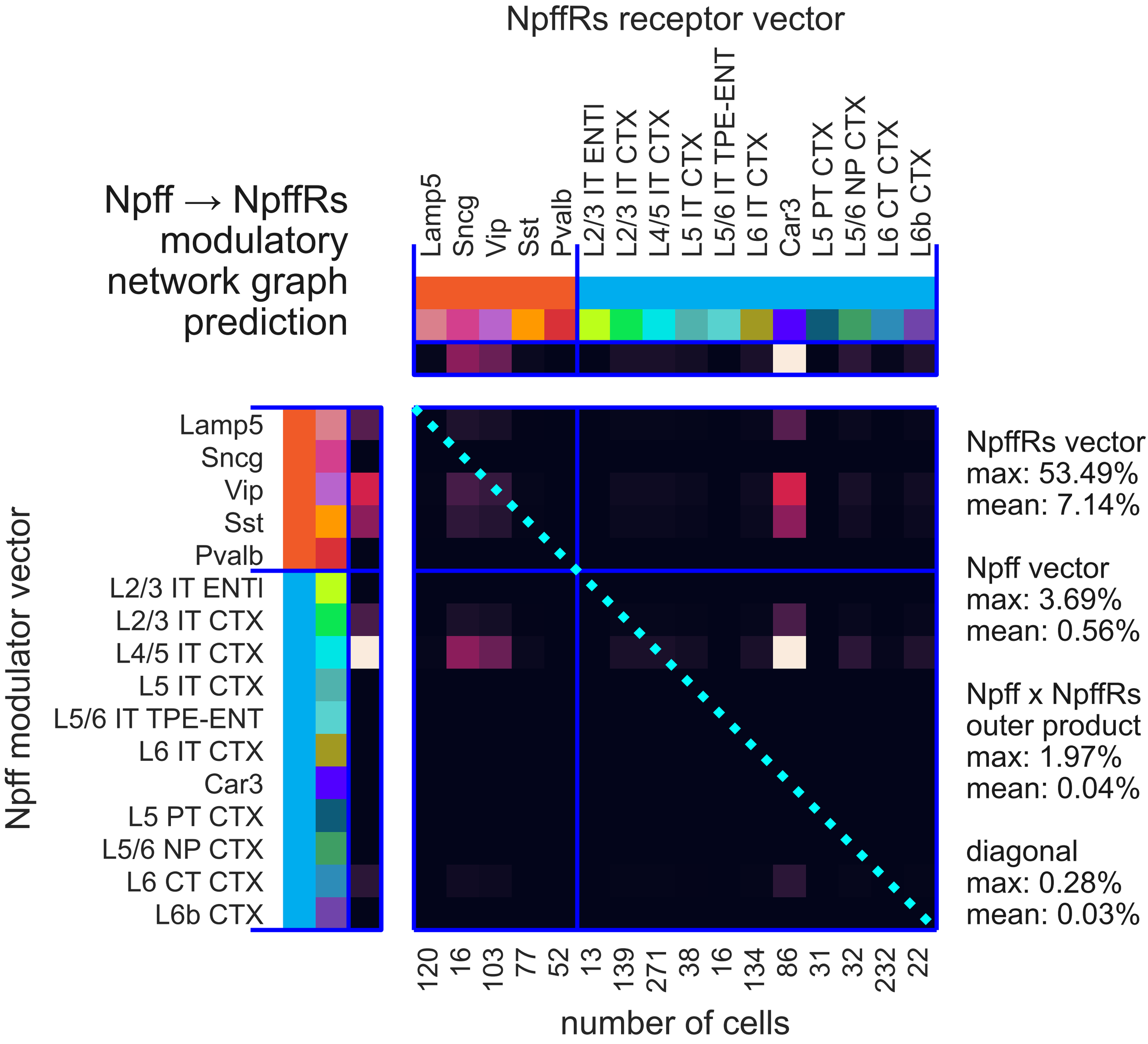


Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

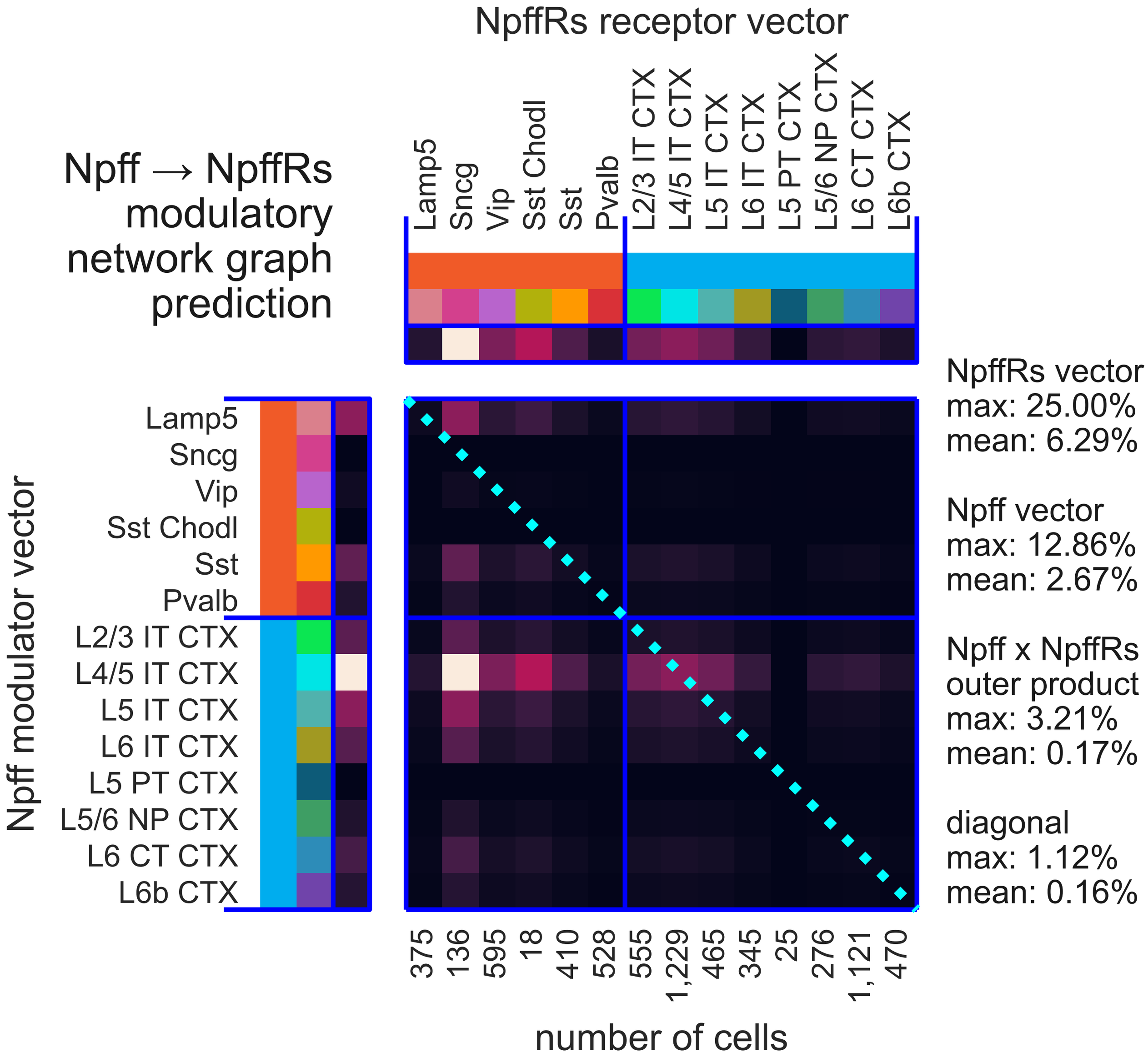



Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)
NpffRs receptor vector
Npff → NpffRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
NpffRs vector
max: 29.41%
mean: 6.69%
Npff modulator vector
Npff vector
max: 2.74%
mean: 0.63%
Npff x NpffRs
outer product
max: 0.81%
mean: 0.04%
diagonal
max: 0.26%
mean: 0.03%
111
17
99
99
82
219
365
61
84
419
18
25
182
number of cells

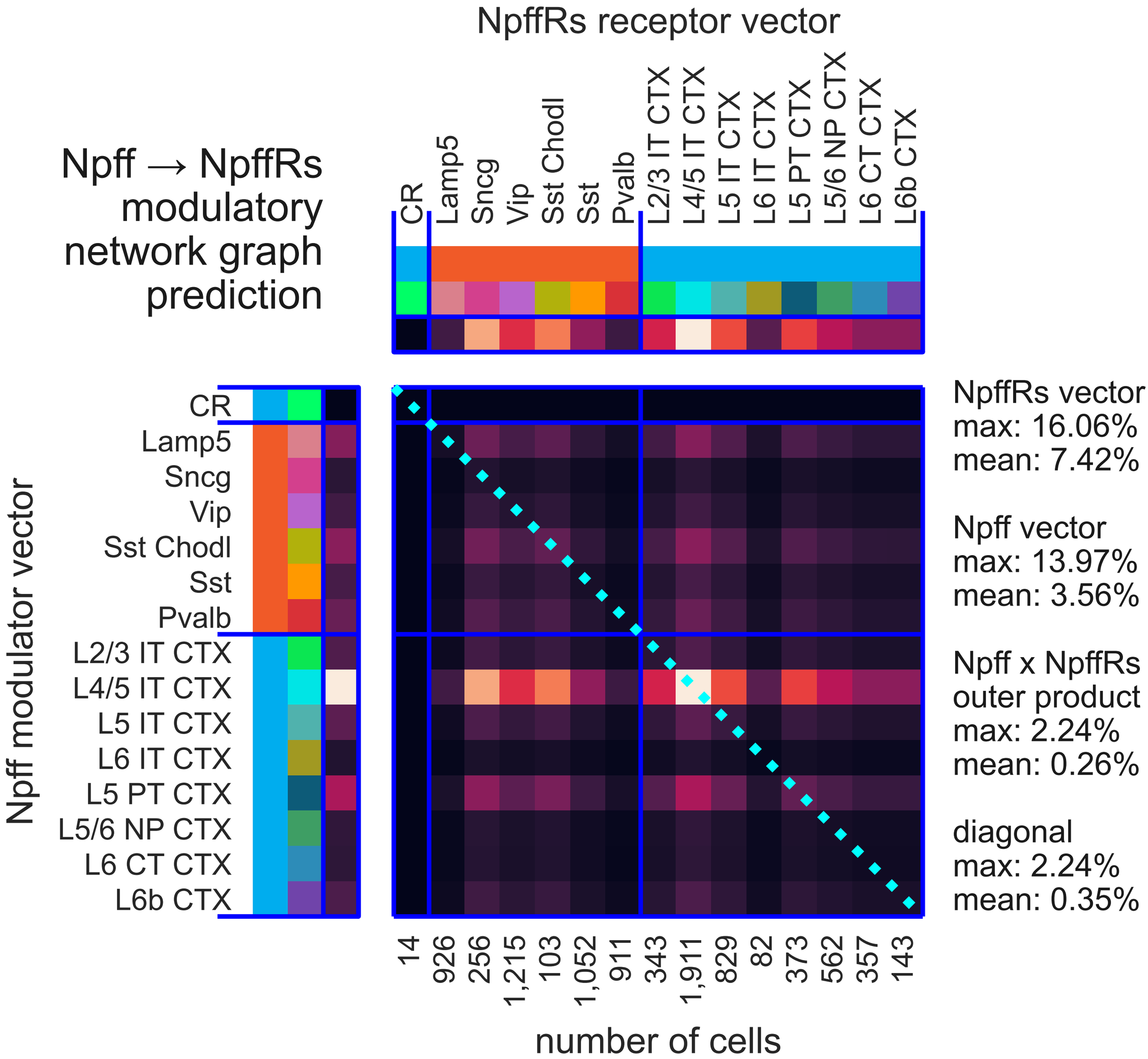
Y21ss thr=10 sn:12402
Gustatory Cortex (GU)

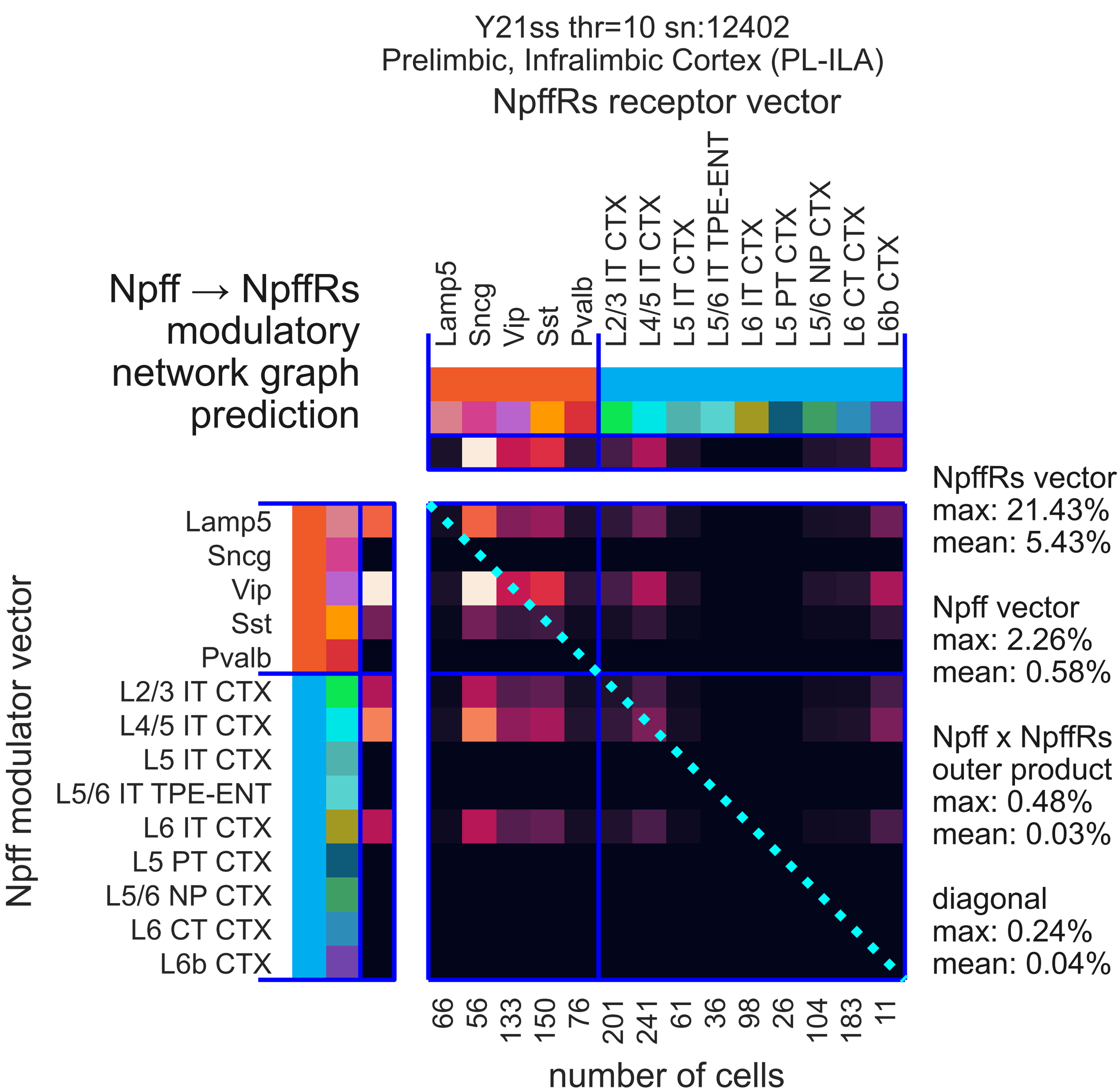


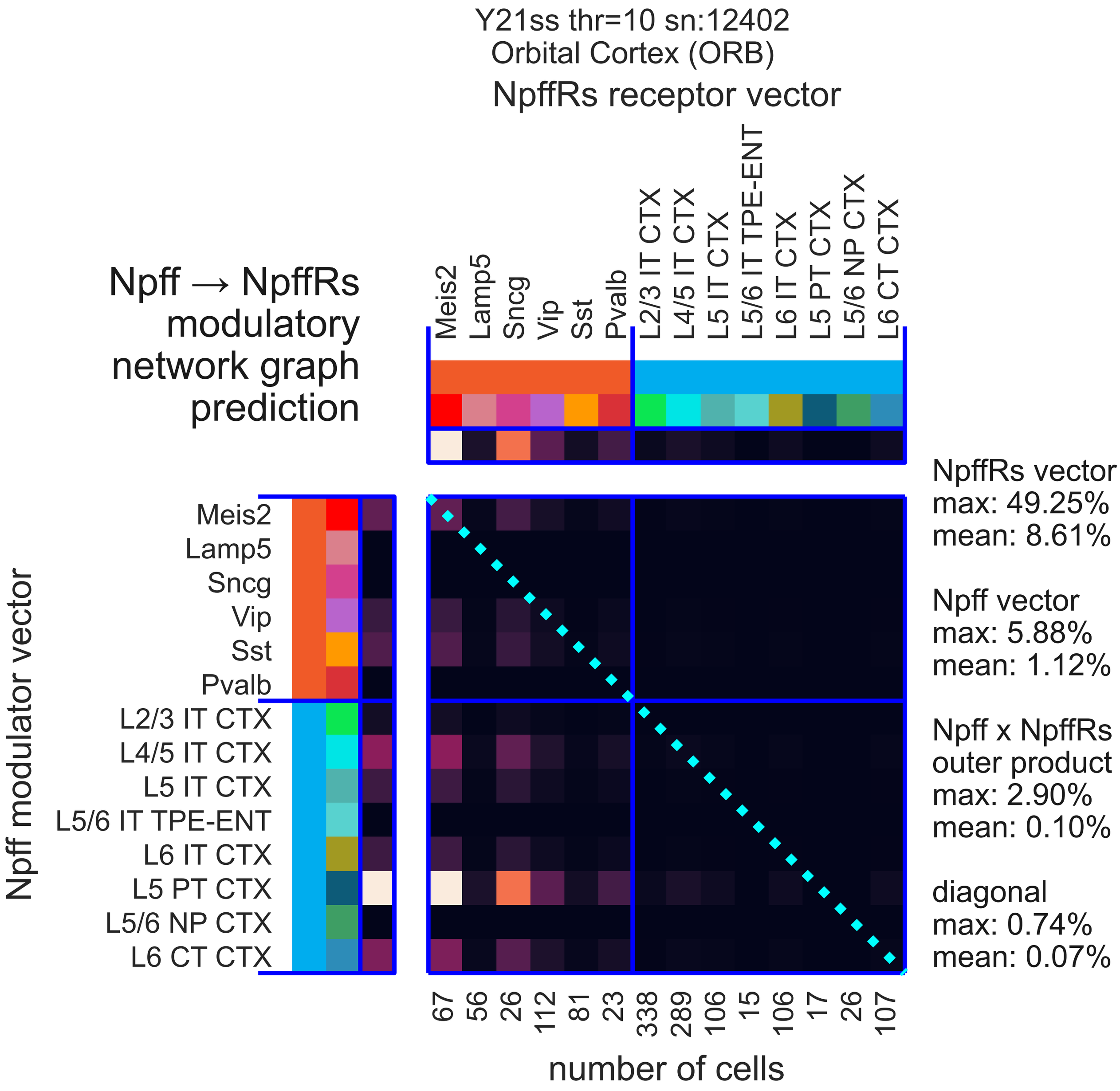
Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)



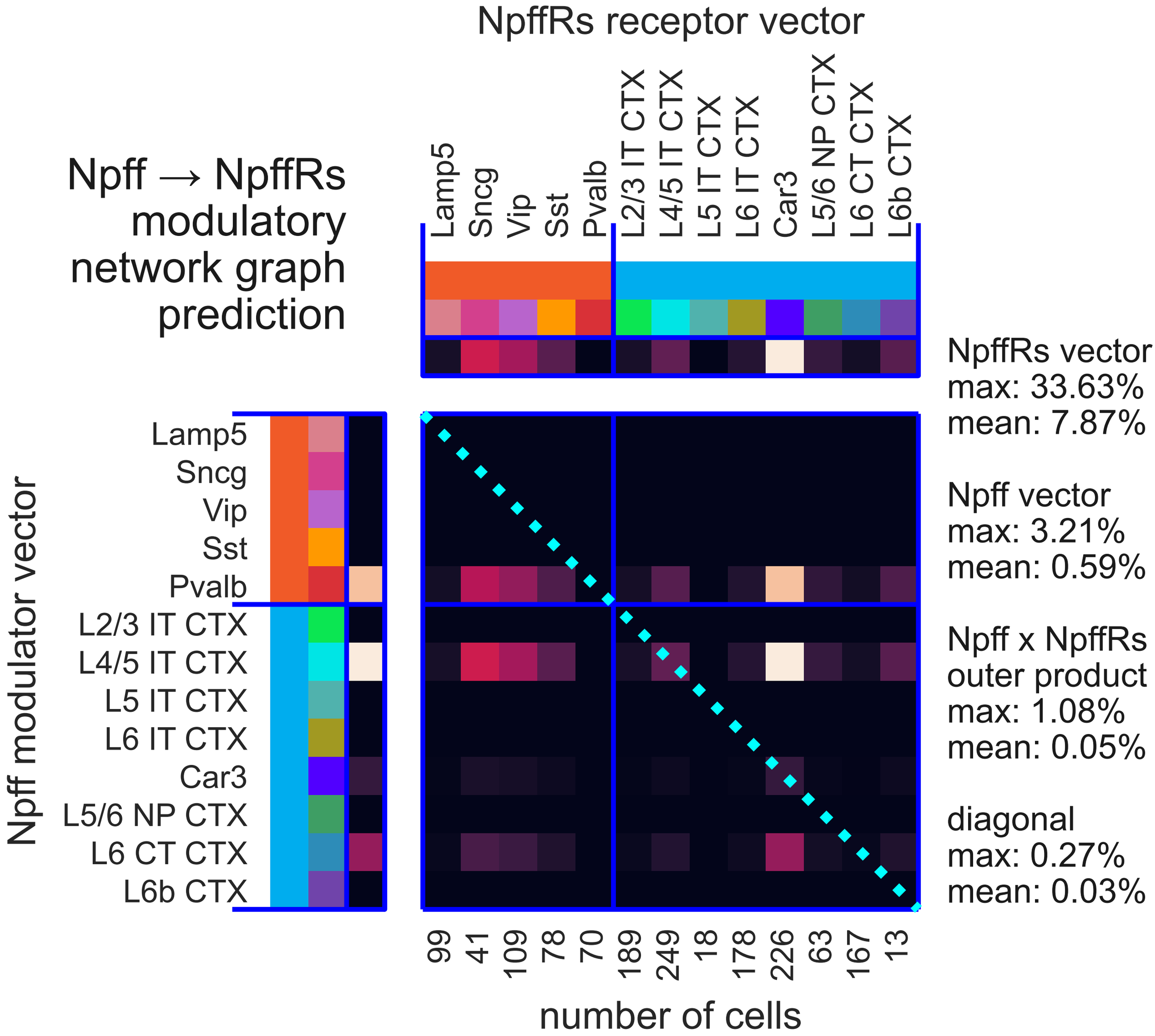
Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



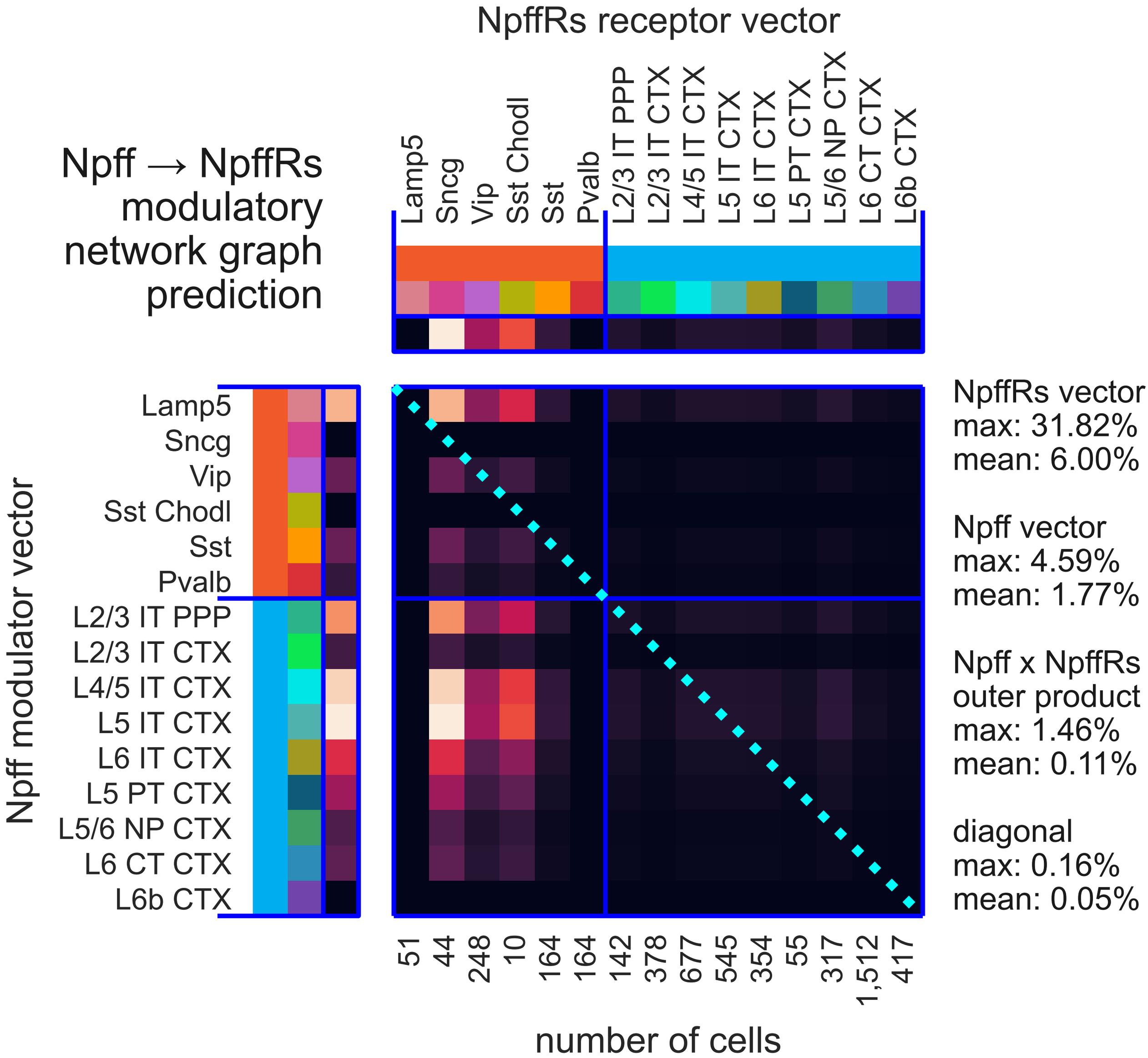

Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)
NpffRs receptor vector
Npff → NpffRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Npff modulator vector
66
56
133
150
76
201
241
61
36
98
26
104
183
11
number of cells
NpffRs vector
max: 21.43%
mean: 5.43%
Npff vector
max: 2.26%
mean: 0.58%
Npff x NpffRs
outer product
max: 0.48%
mean: 0.03%
diagonal
max: 0.24%
mean: 0.04%

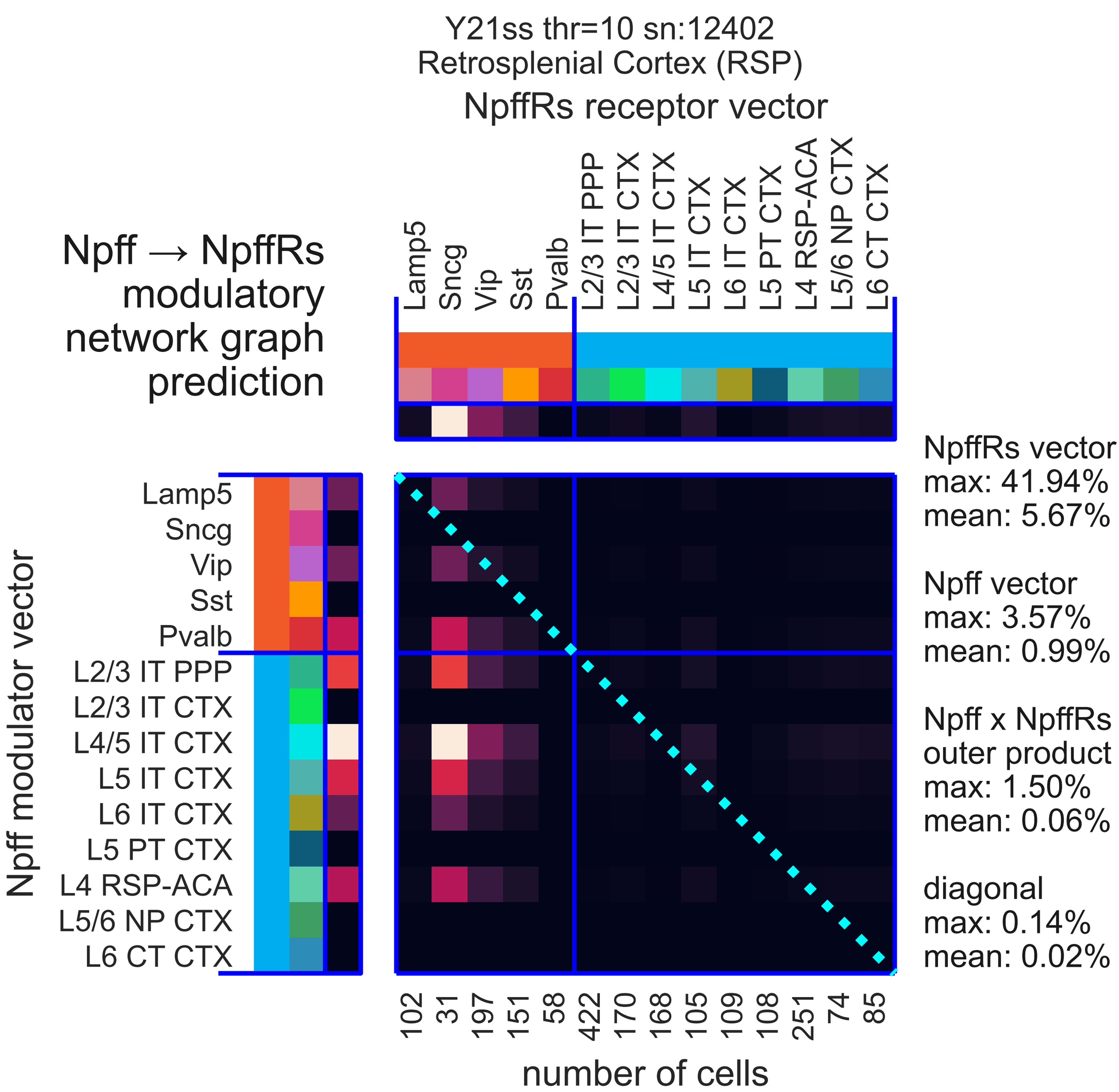

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
NpffRs receptor vector
Npff → NpffRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Npff modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
NpffRs vector
max: 49.25%
mean: 8.61%
Npff vector
max: 5.88%
mean: 1.12%
Npff x NpffRs
outer product
max: 2.90%
mean: 0.10%
diagonal
max: 0.74%
mean: 0.07%

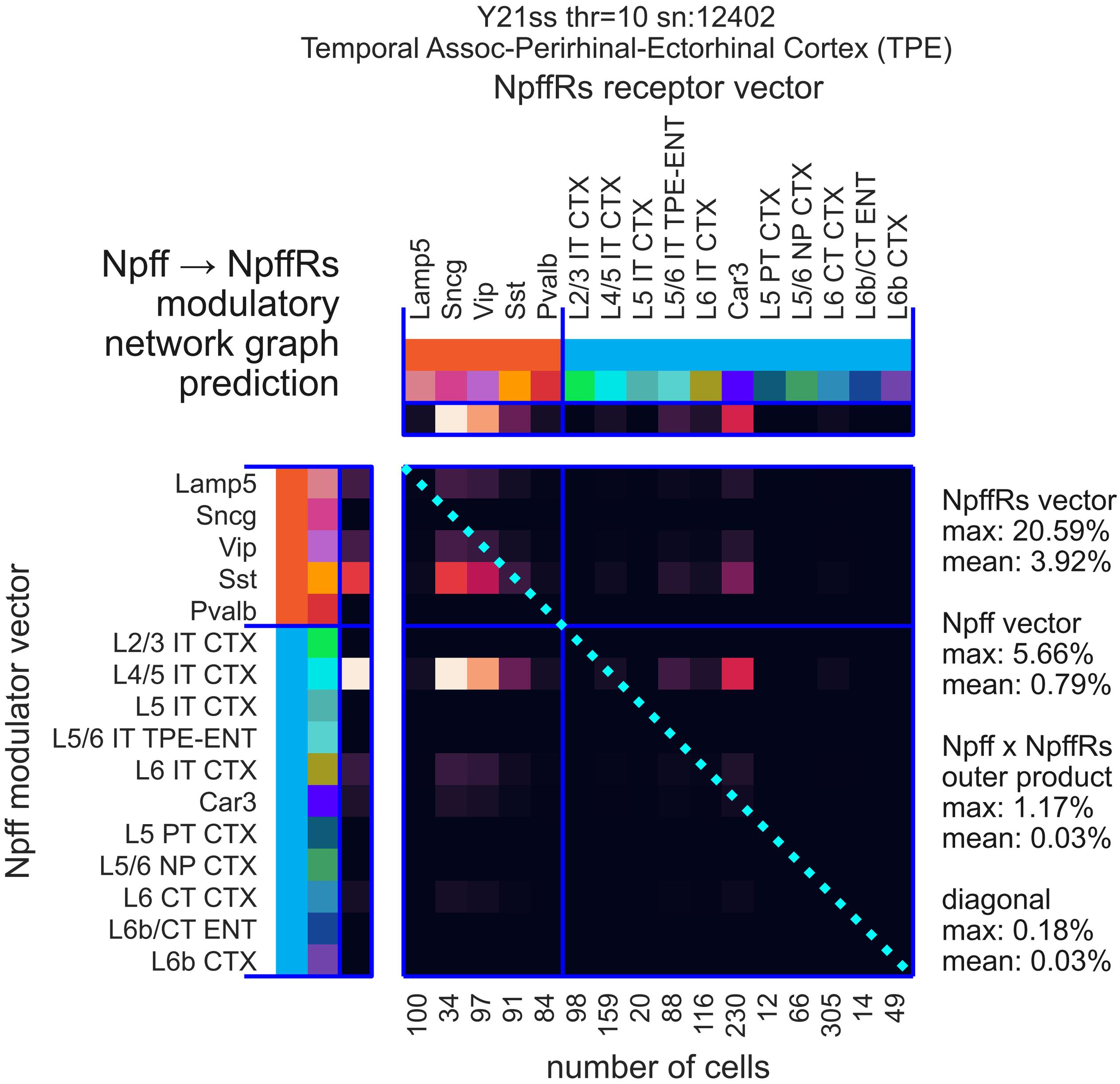
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



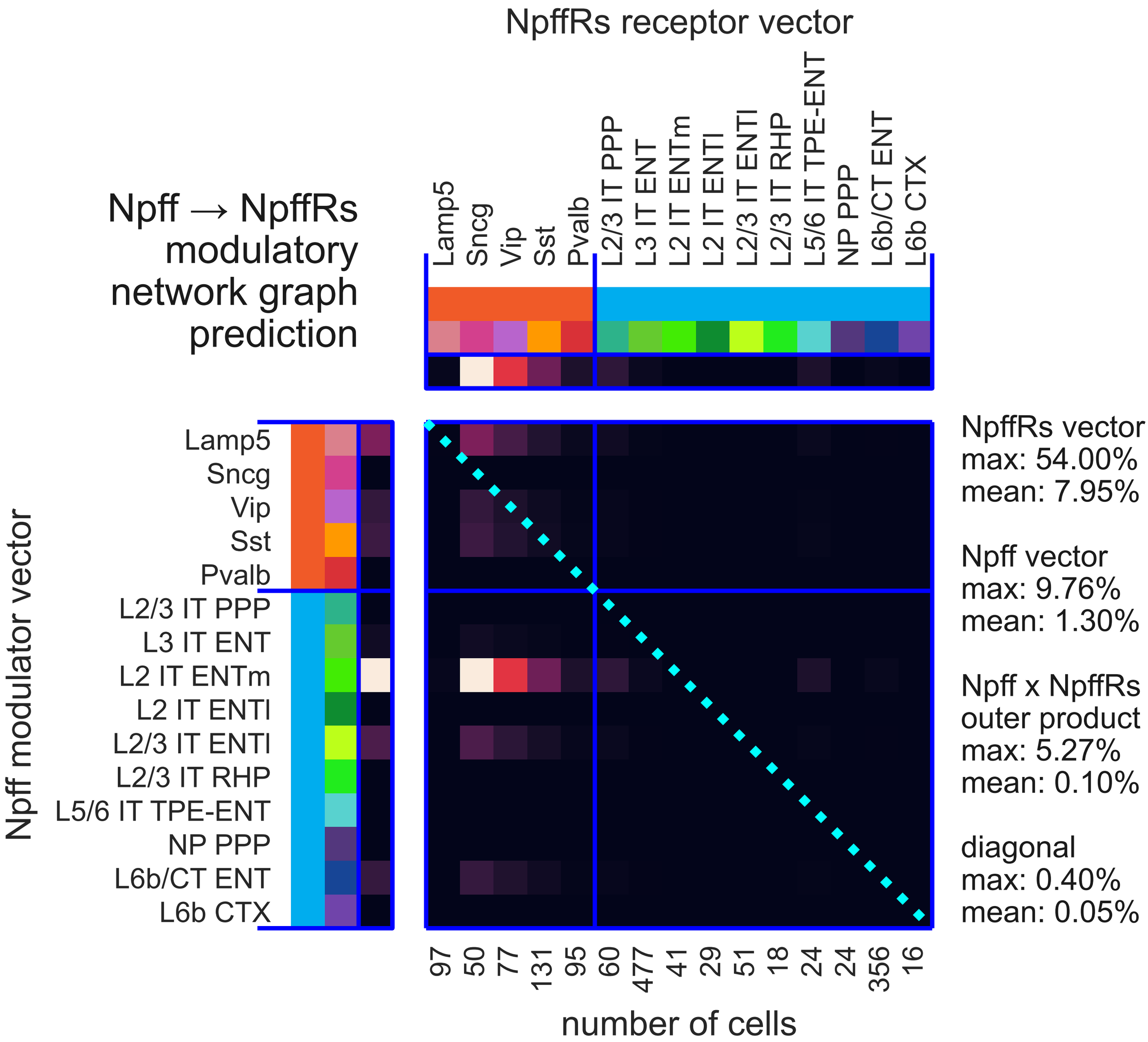
Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

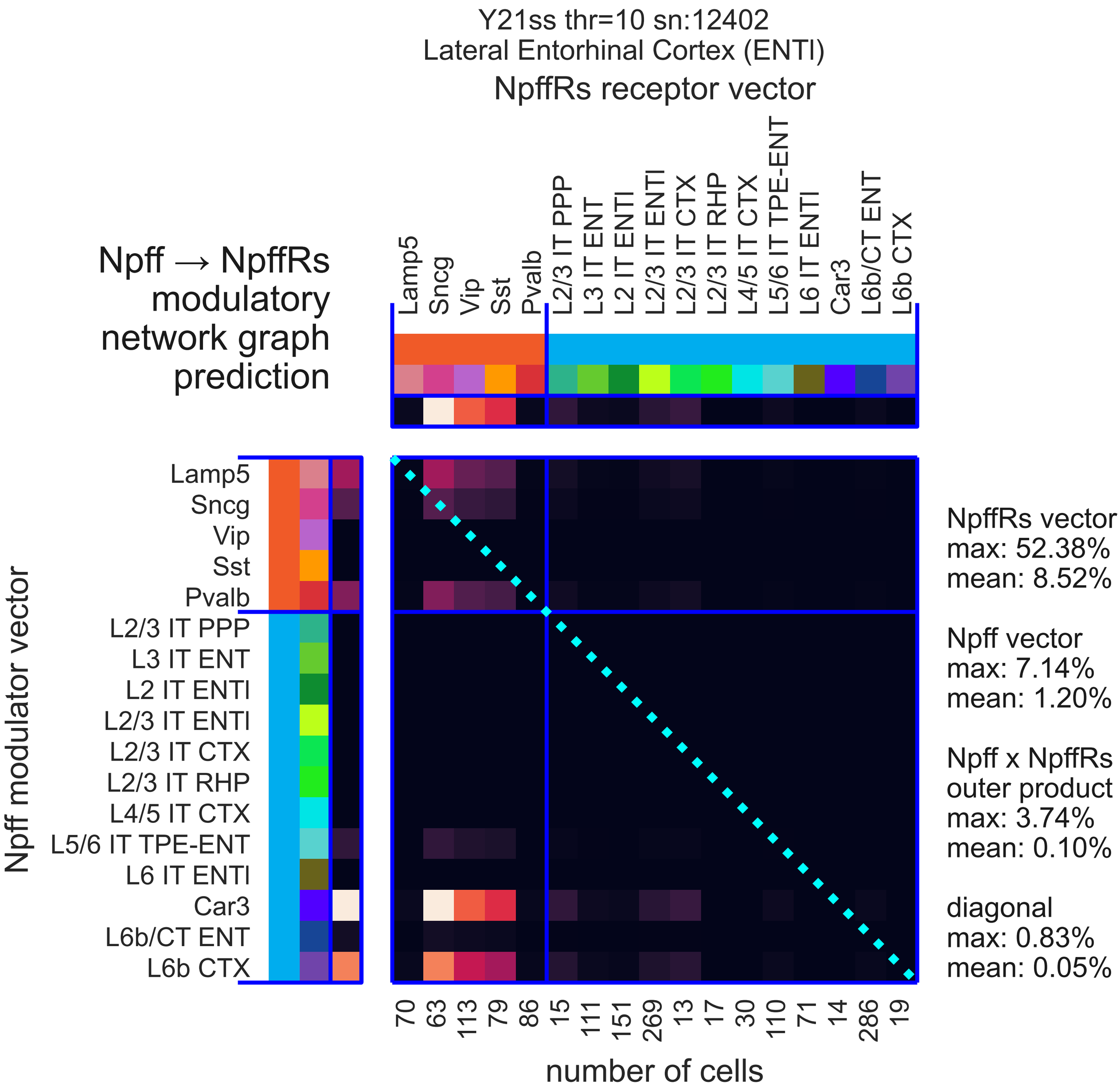



Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
NpffRs receptor vector
Npff → NpffRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Npff modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
NpffRs vector
max: 41.94%
mean: 5.67%
Npff vector
max: 3.57%
mean: 0.99%
Npff x NpffRs
outer product
max: 1.50%
mean: 0.06%
diagonal
max: 0.14%
mean: 0.02%

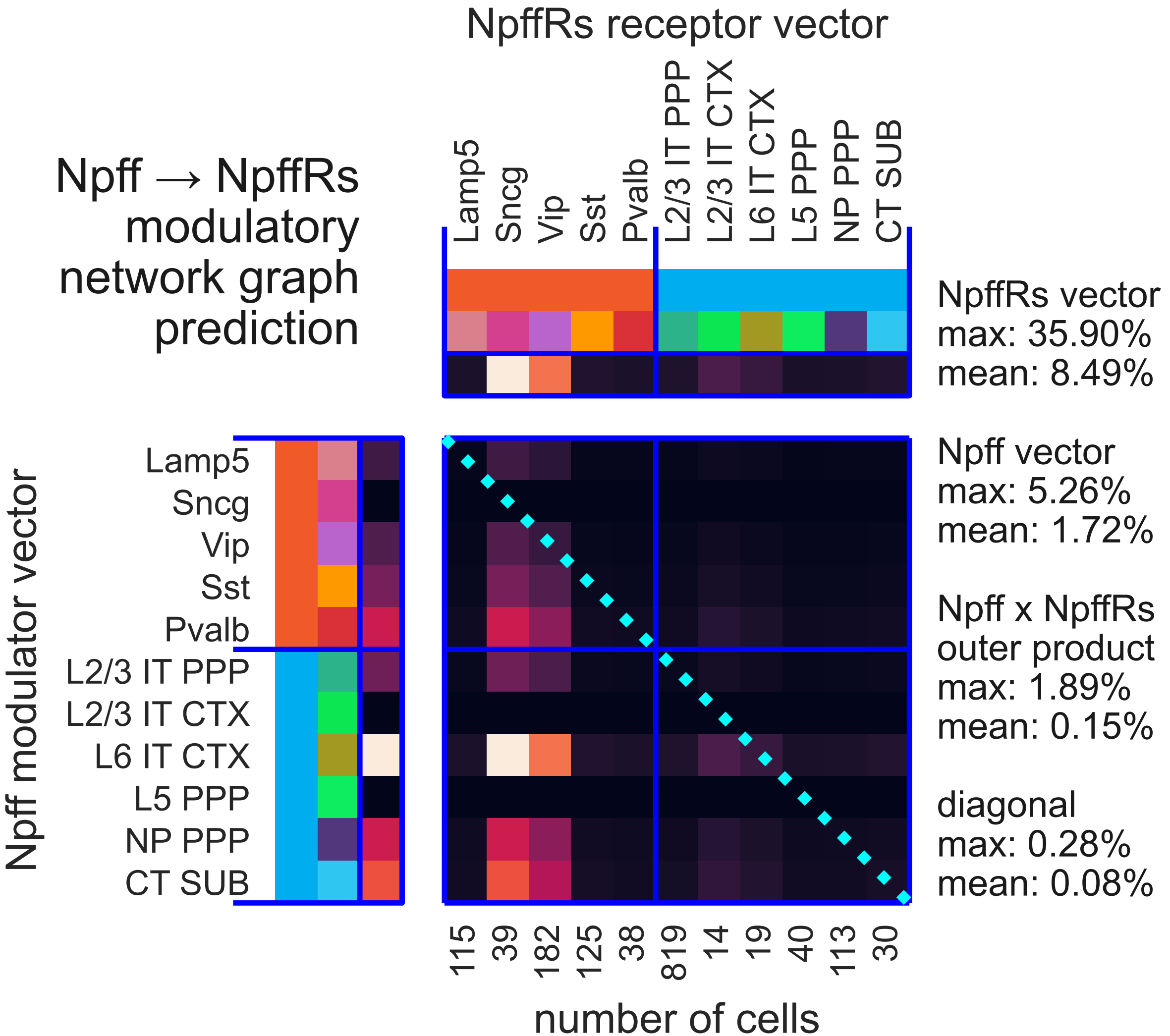

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)
NpffRs receptor vector
Npff → NpffRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b/CT ENT
L6b CTX
Npff modulator vector
100
34
97
91
84
98
159
20
88
116
230
12
66
305
14
49
number of cells
NpffRs vector
max: 20.59%
mean: 3.92%
Npff vector
max: 5.66%
mean: 0.79%
Npff x NpffRs
outer product
max: 1.17%
mean: 0.03%
diagonal
max: 0.18%
mean: 0.03%

Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

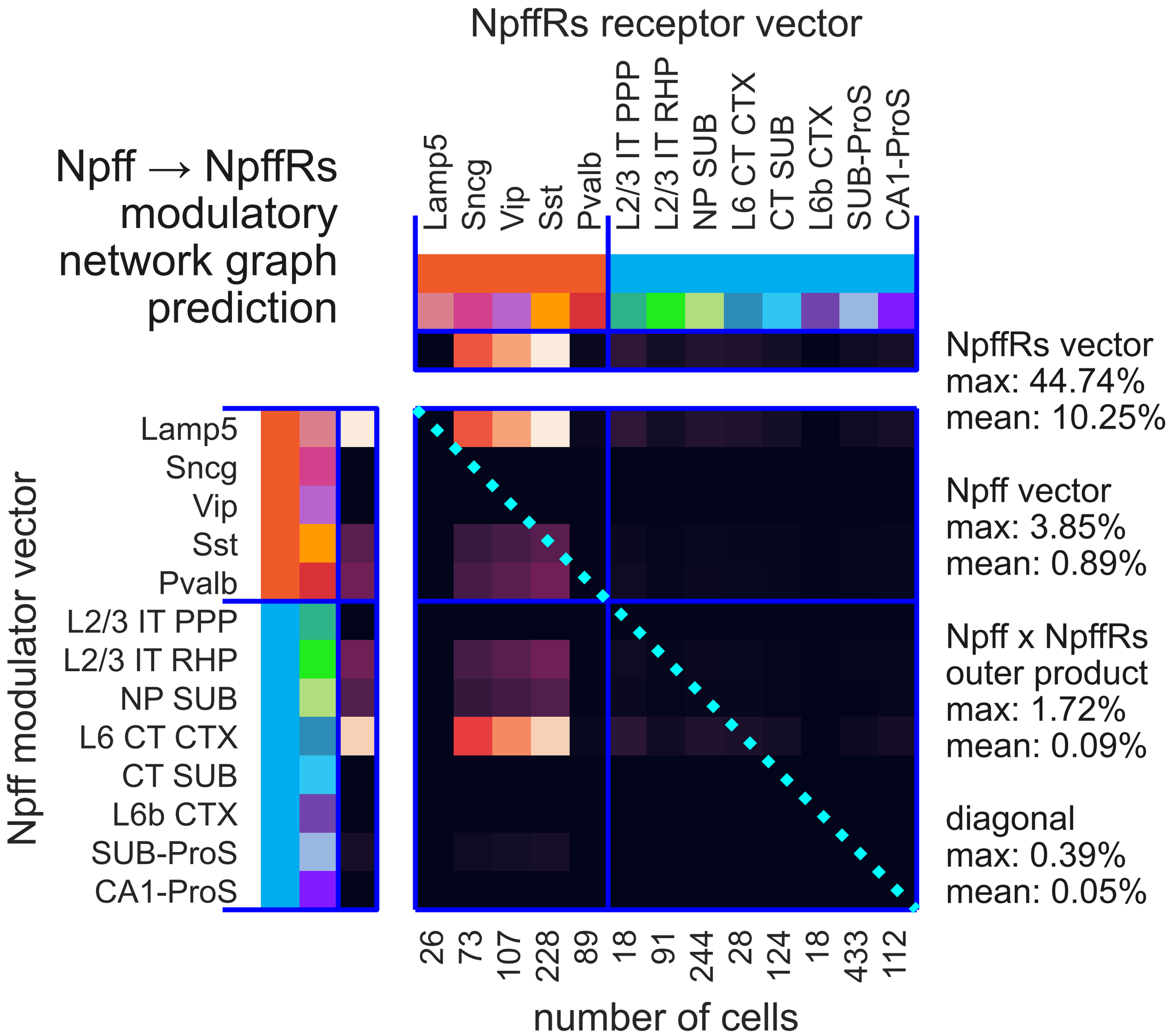



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
NpffRs receptor vector
Npff → NpffRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Npff modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
NpffRs vector
max: 52.38%
mean: 8.52%
Npff vector
max: 7.14%
mean: 1.20%
Npff x NpffRs
outer product
max: 3.74%
mean: 0.10%
diagonal
max: 0.83%
mean: 0.05%

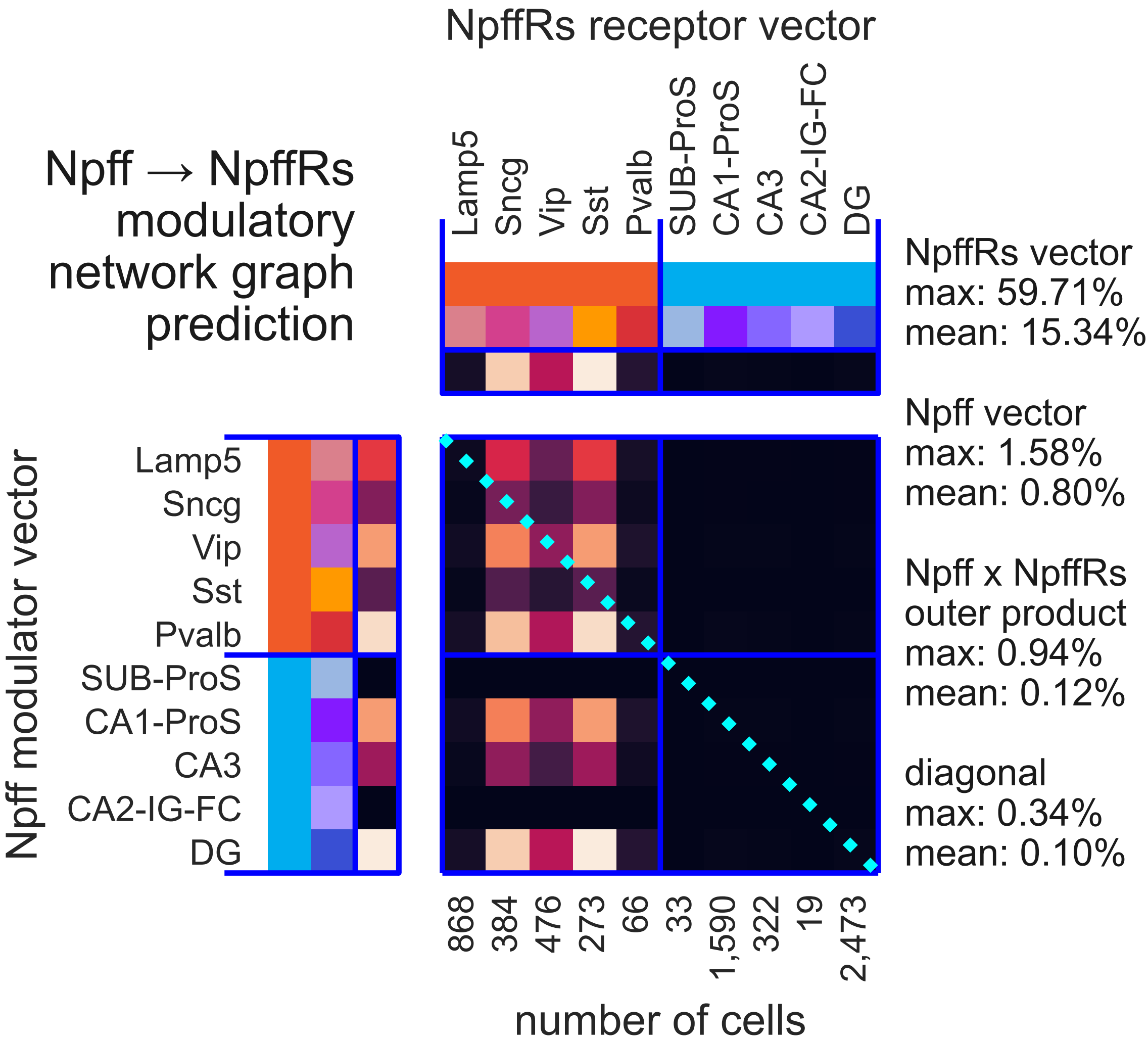
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



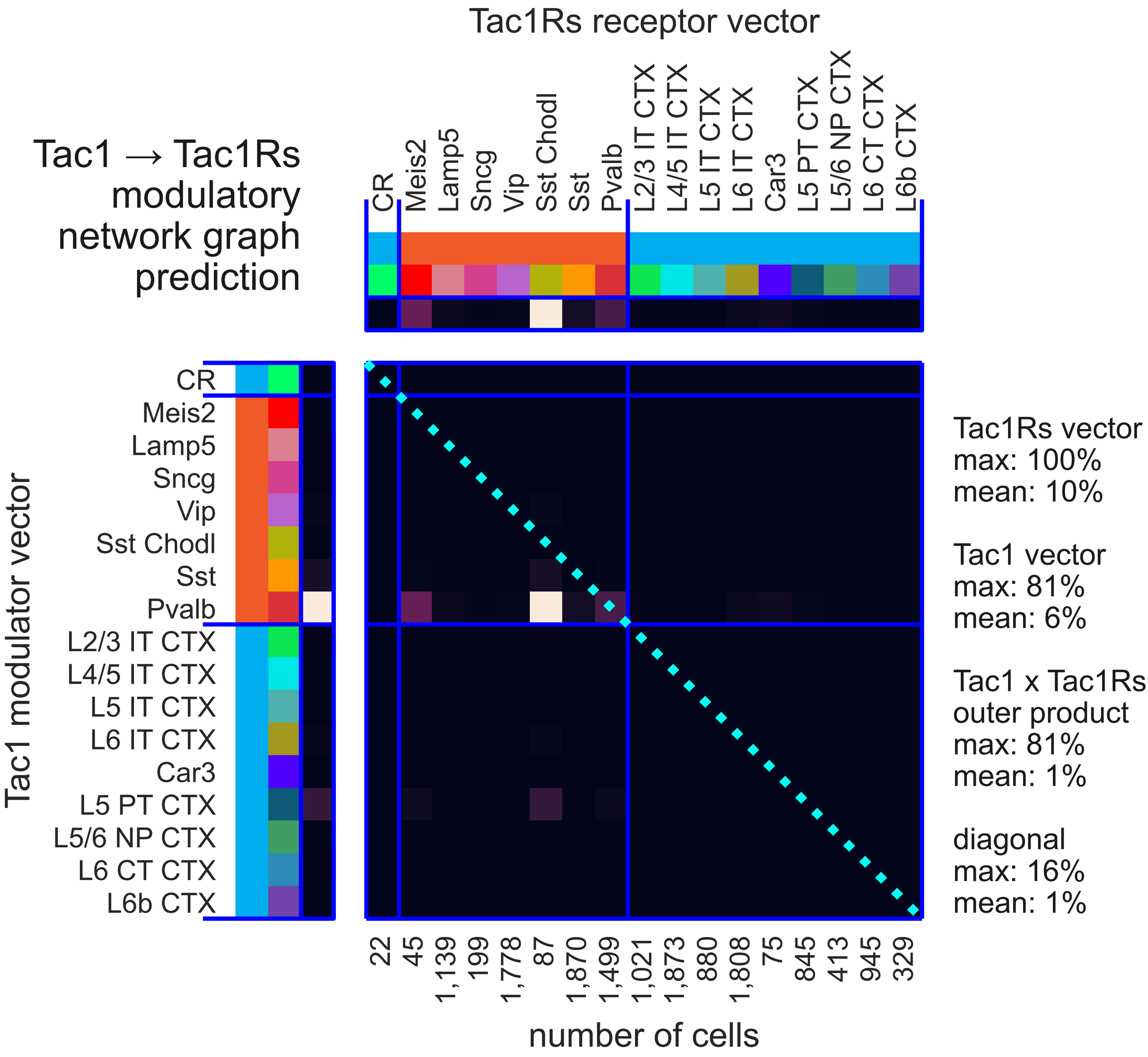
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



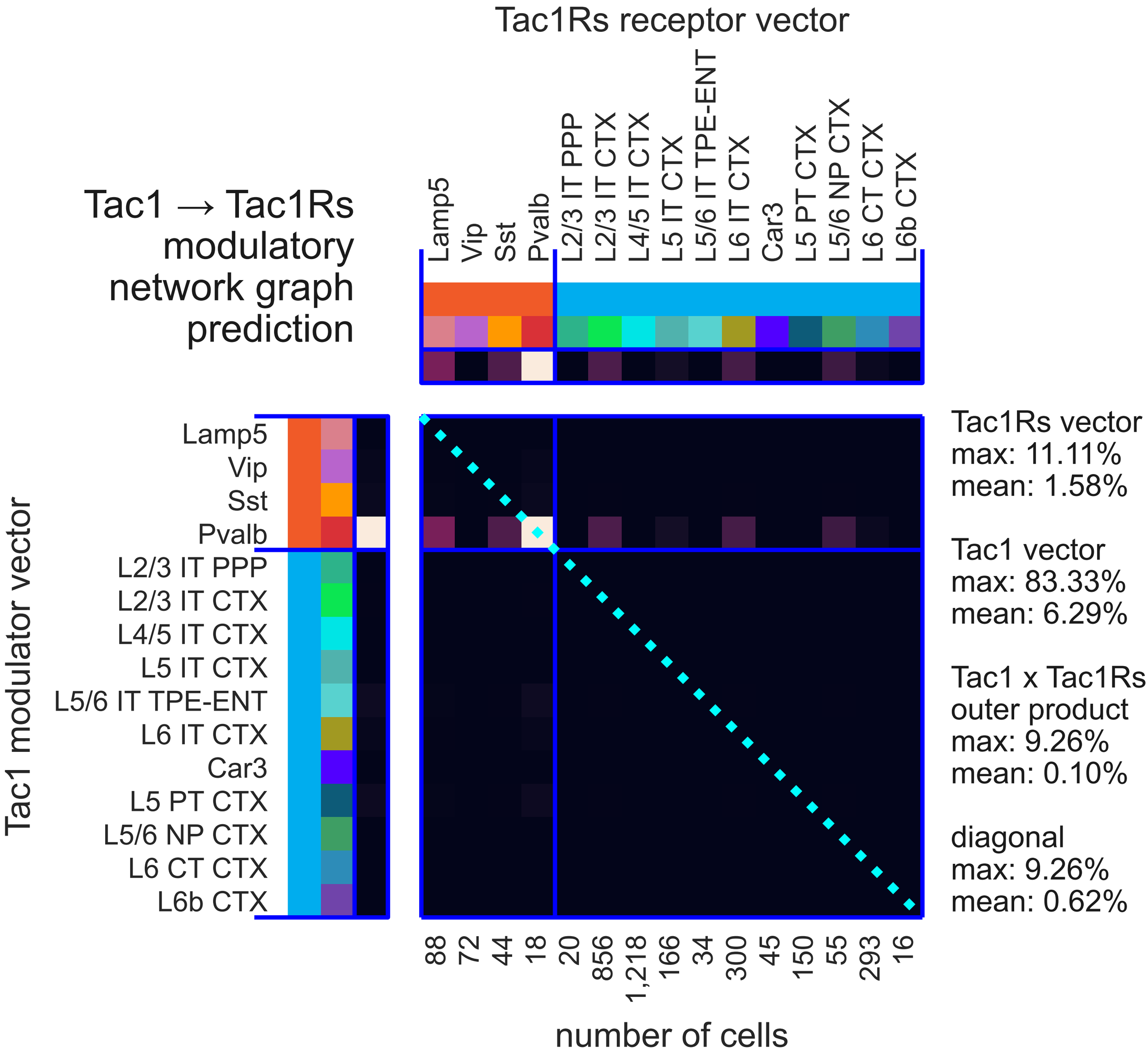
Y21ss thr=10 sn:12402
Hippocampus (HIP)



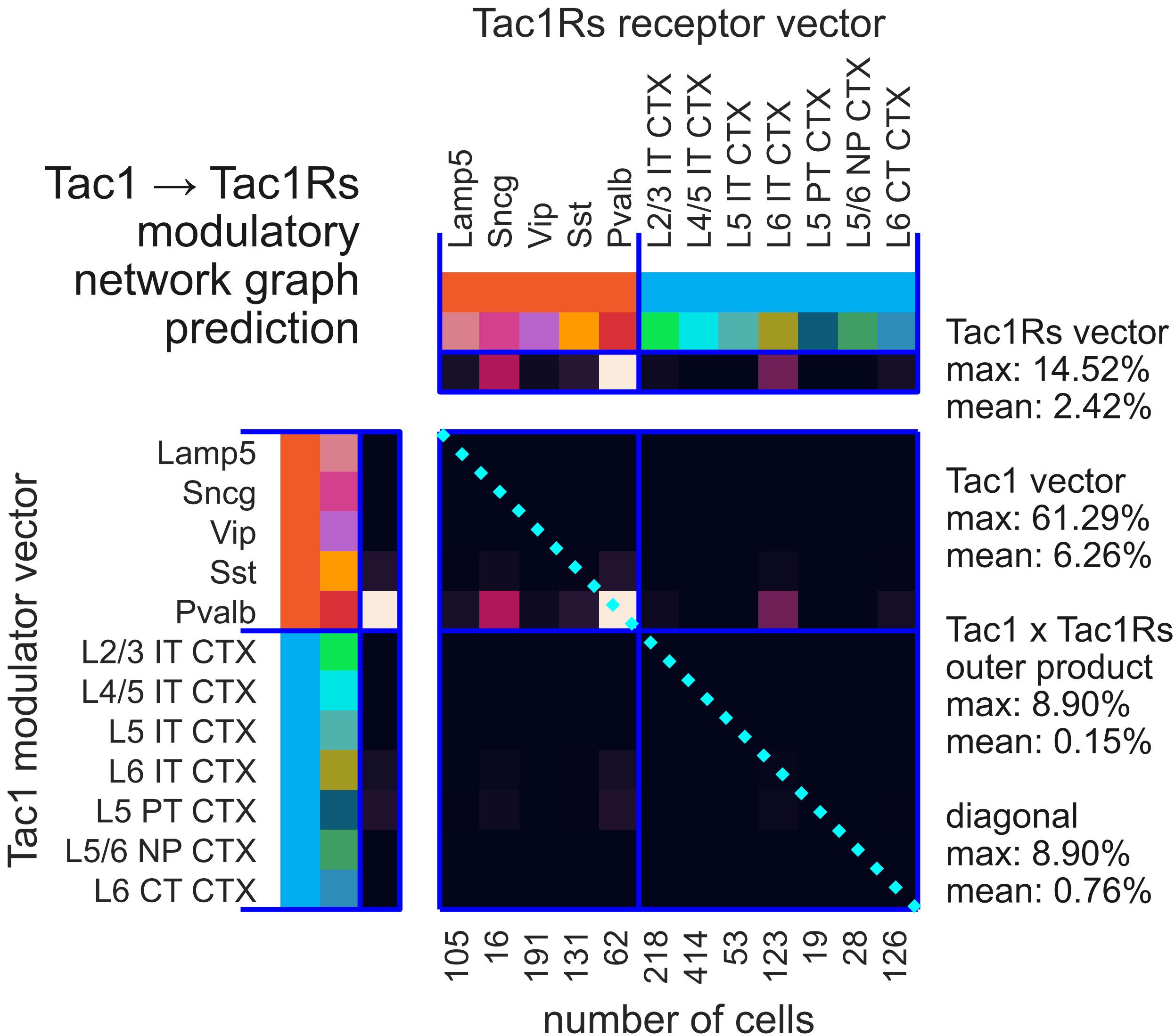
Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)



Y21ss thr=10 sn:12402
Visual Cortex (VIS)



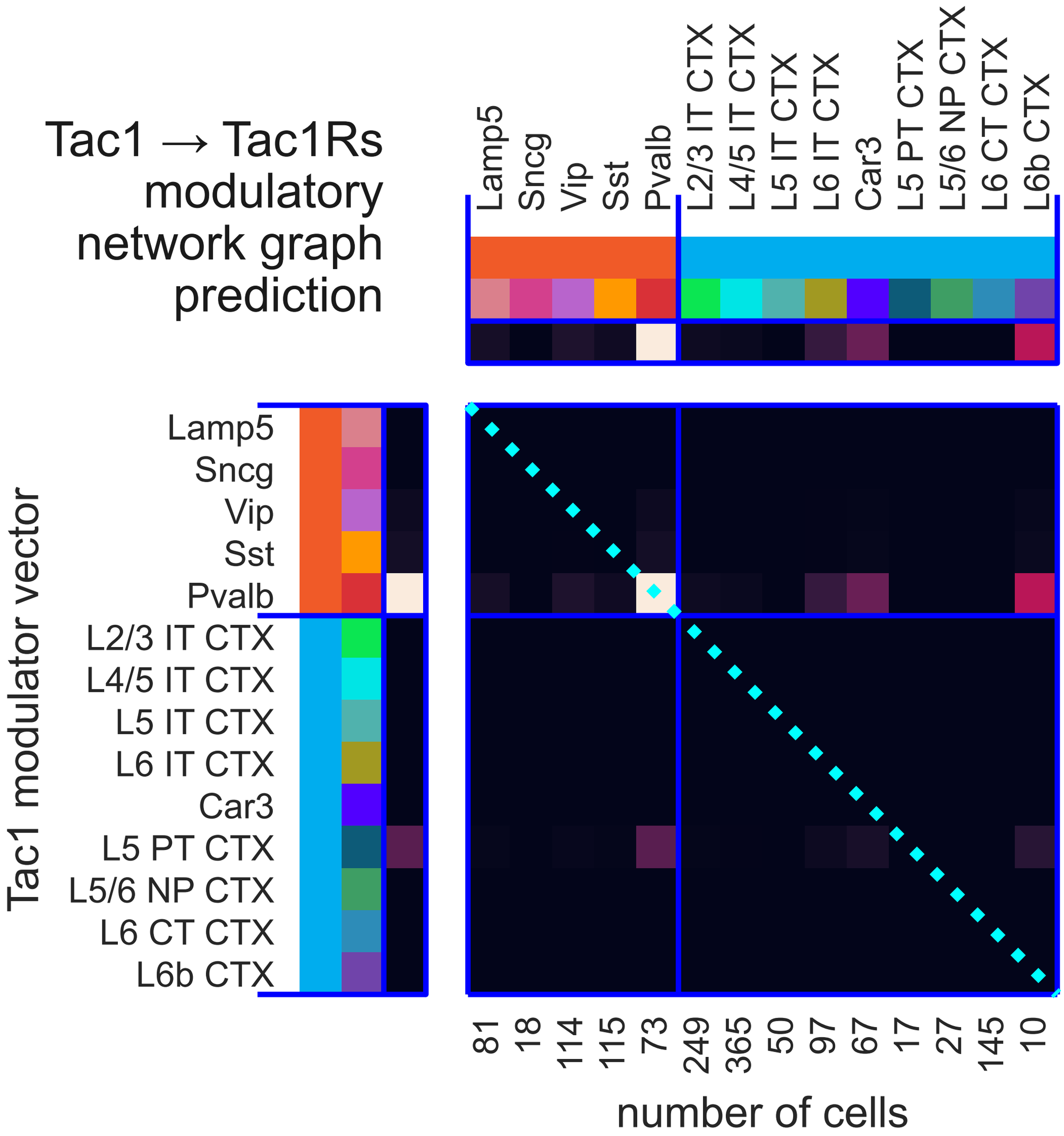
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

Tac1Rs receptor vector

Tac1 → Tac1Rs
modulatory
network graph
prediction



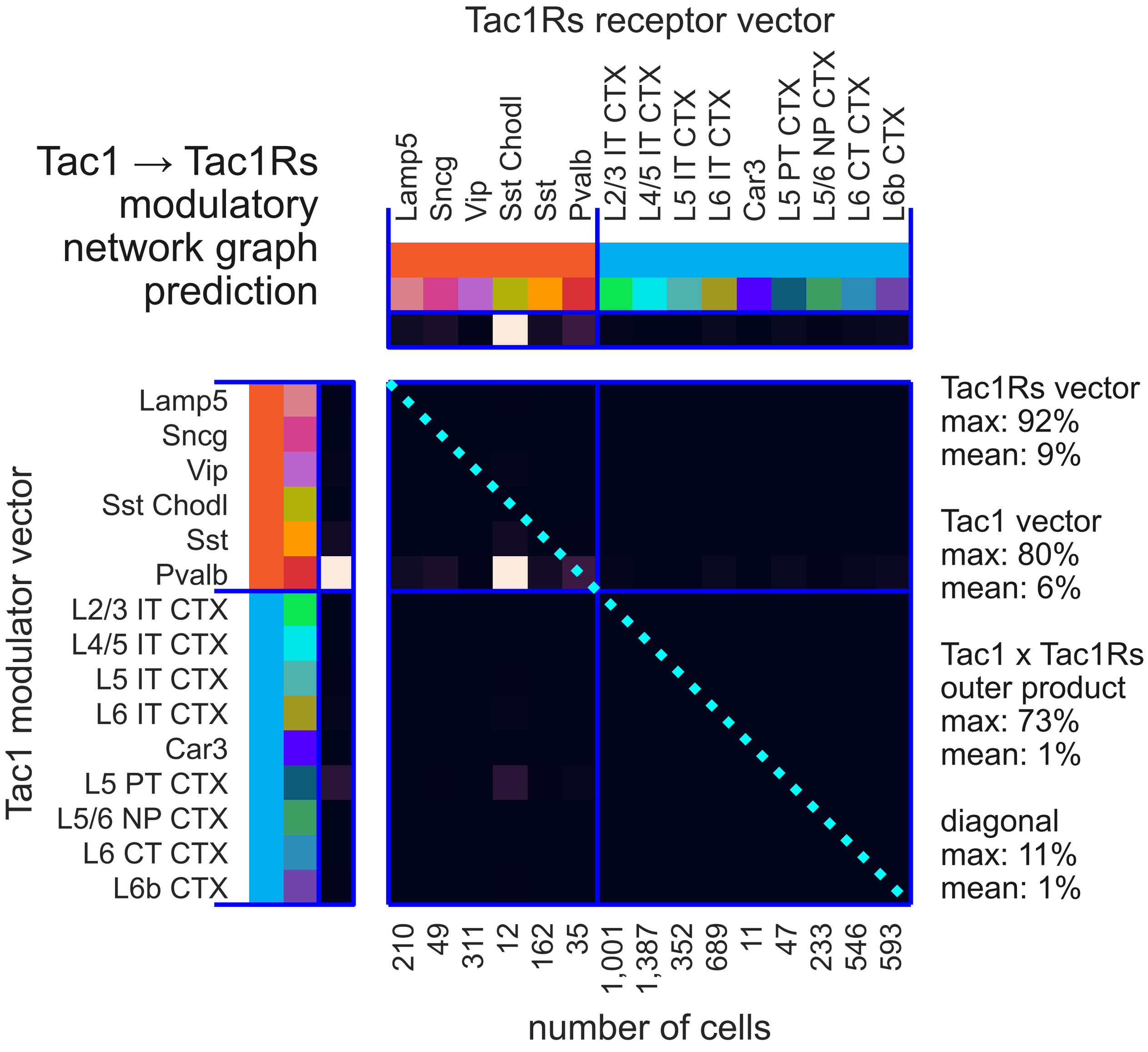
Tac1Rs vector
max: 21.92%
mean: 3.30%

Tac1 vector
max: 50.68%
mean: 4.77%

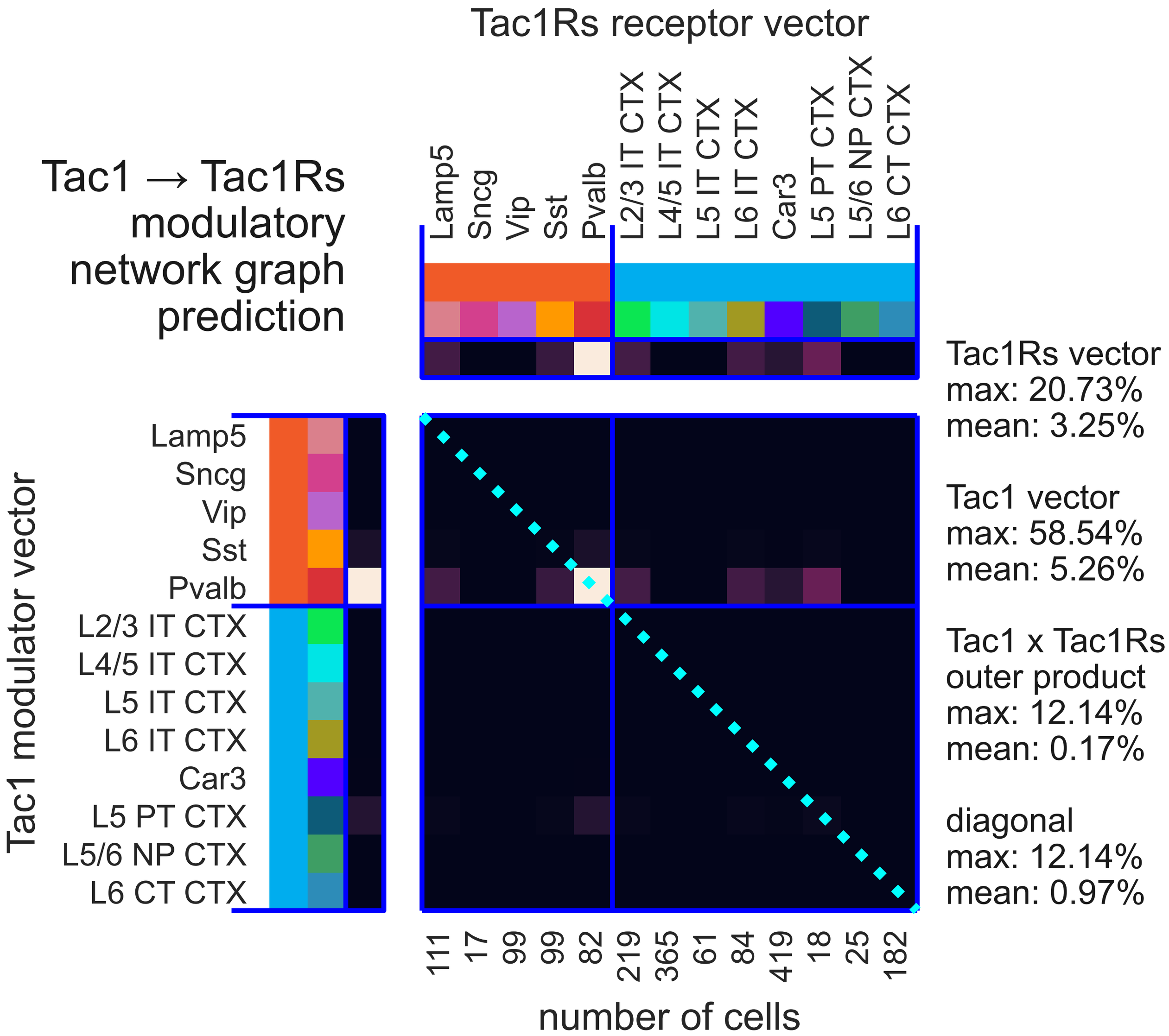
Tac1 x Tac1Rs
outer product
max: 11.11%
mean: 0.16%

diagonal
max: 11.11%
mean: 0.80%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



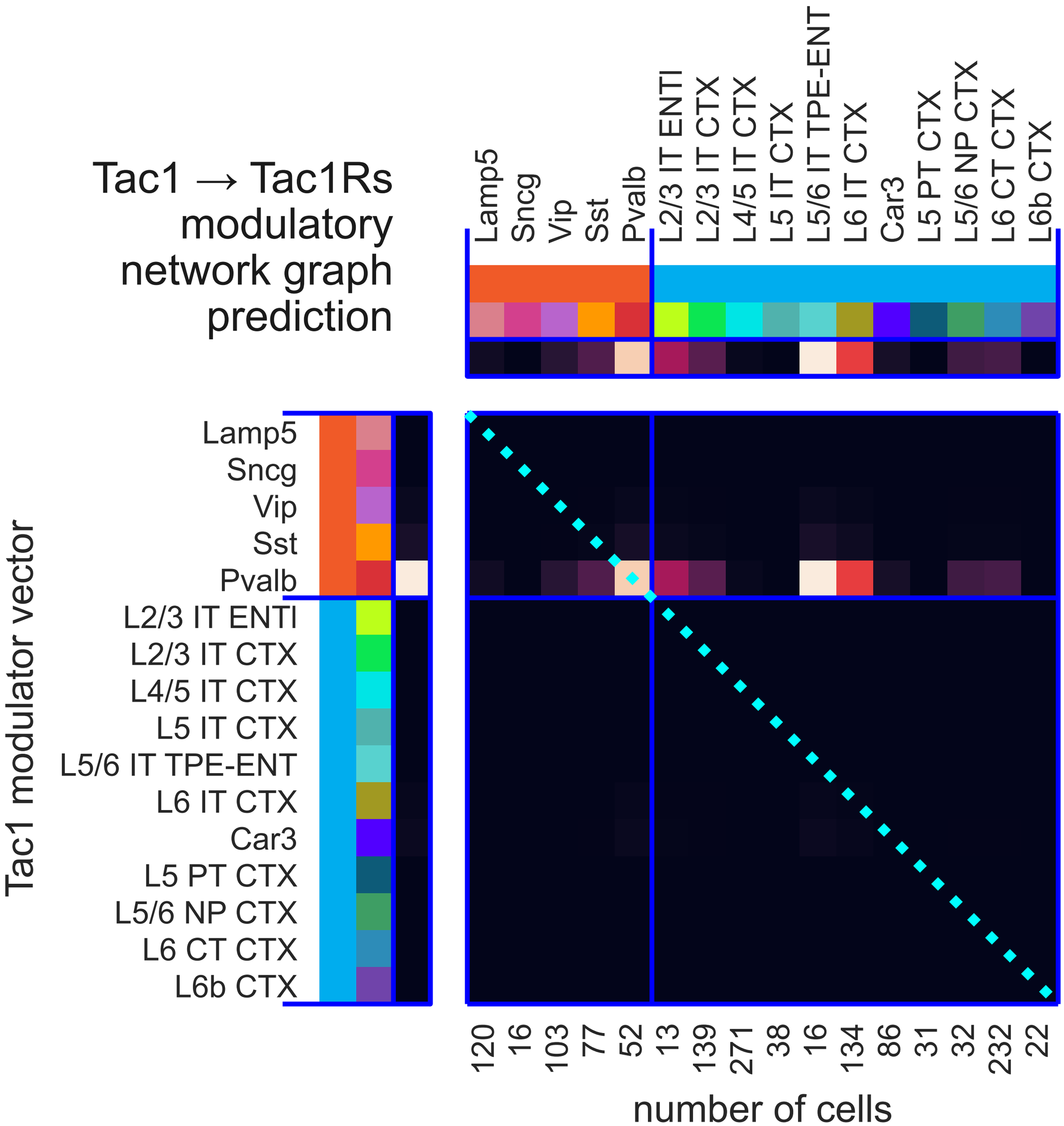
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



Y21ss thr=10 sn:12402
Gustatory Cortex (GU)

Tac1Rs receptor vector

Tac1 → Tac1Rs
modulatory
network graph
prediction



Tac1Rs vector
max: 18.75%
mean: 4.63%

Tac1 vector
max: 82.69%
mean: 5.85%

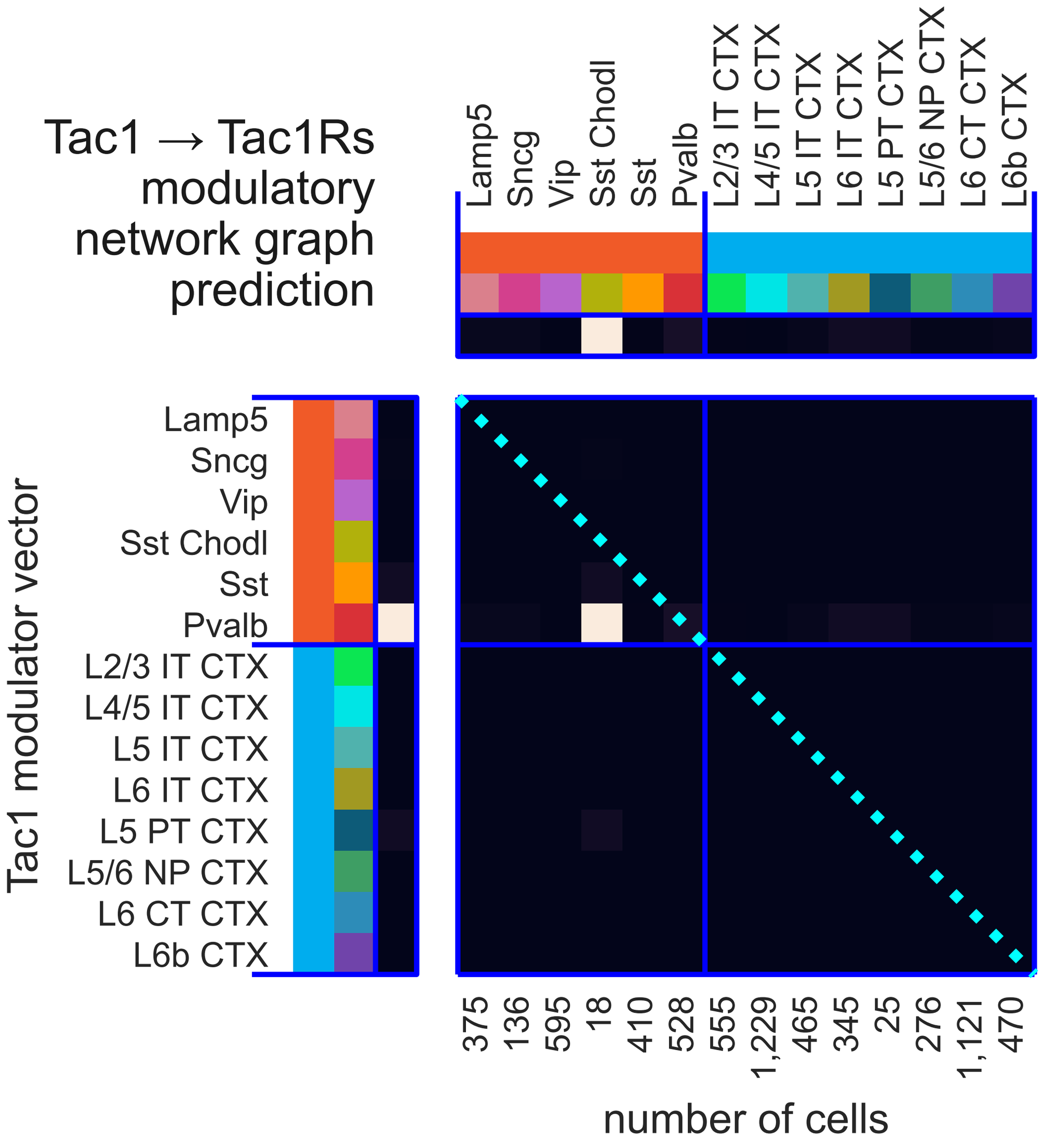
Tac1 x Tac1Rs
outer product
max: 15.50%
mean: 0.27%

diagonal
max: 14.31%
mean: 0.92%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)

Tac1Rs receptor vector

Tac1 → Tac1Rs
modulatory
network graph
prediction



Tac1Rs vector
max: 94%
mean: 9%

Tac1 vector
max: 90%
mean: 7%

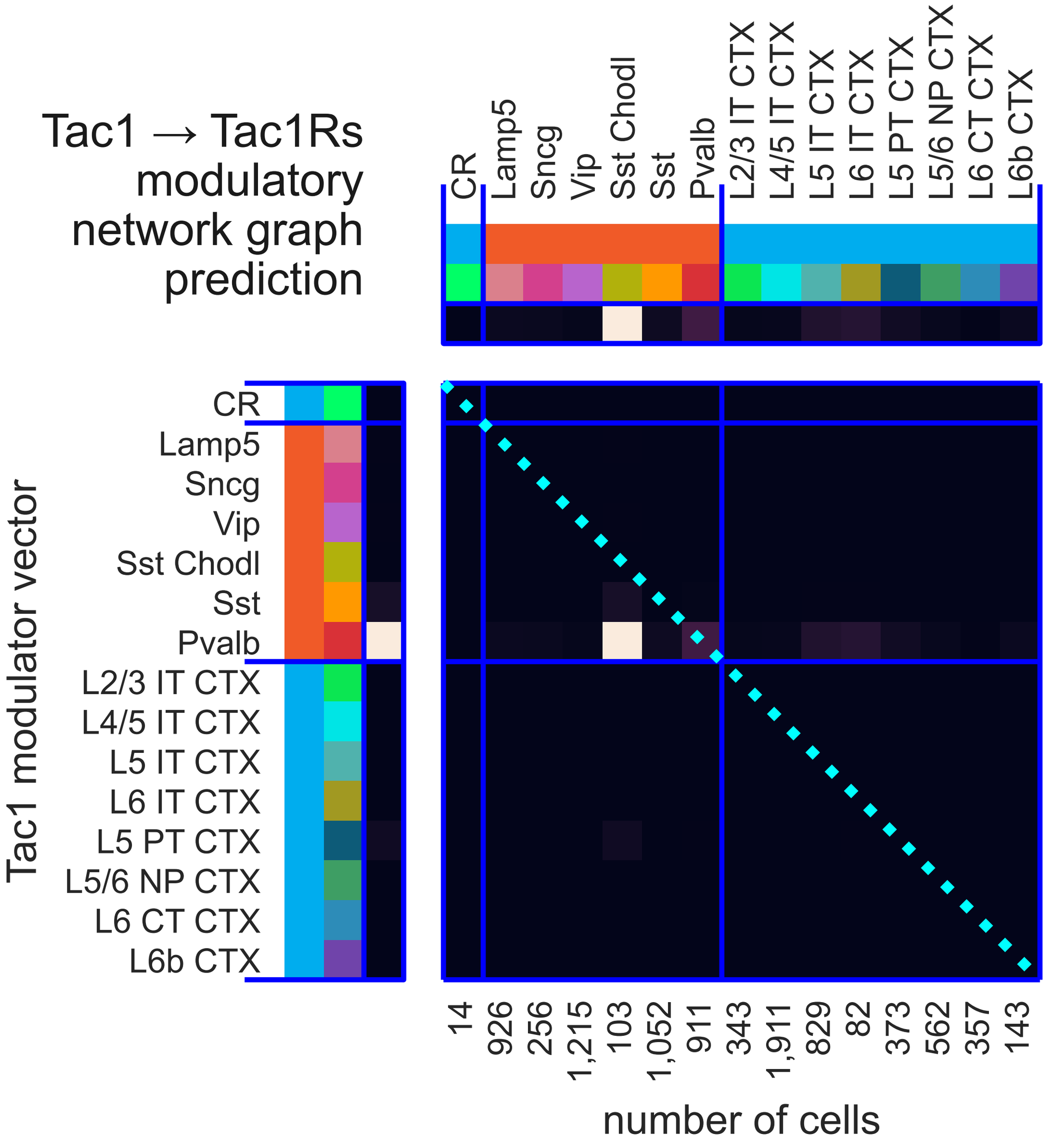
Tac1 x Tac1Rs
outer product
max: 85%
mean: 1%

diagonal
max: 5%
mean: 0%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

Tac1Rs receptor vector

Tac1 → Tac1Rs
modulatory
network graph
prediction



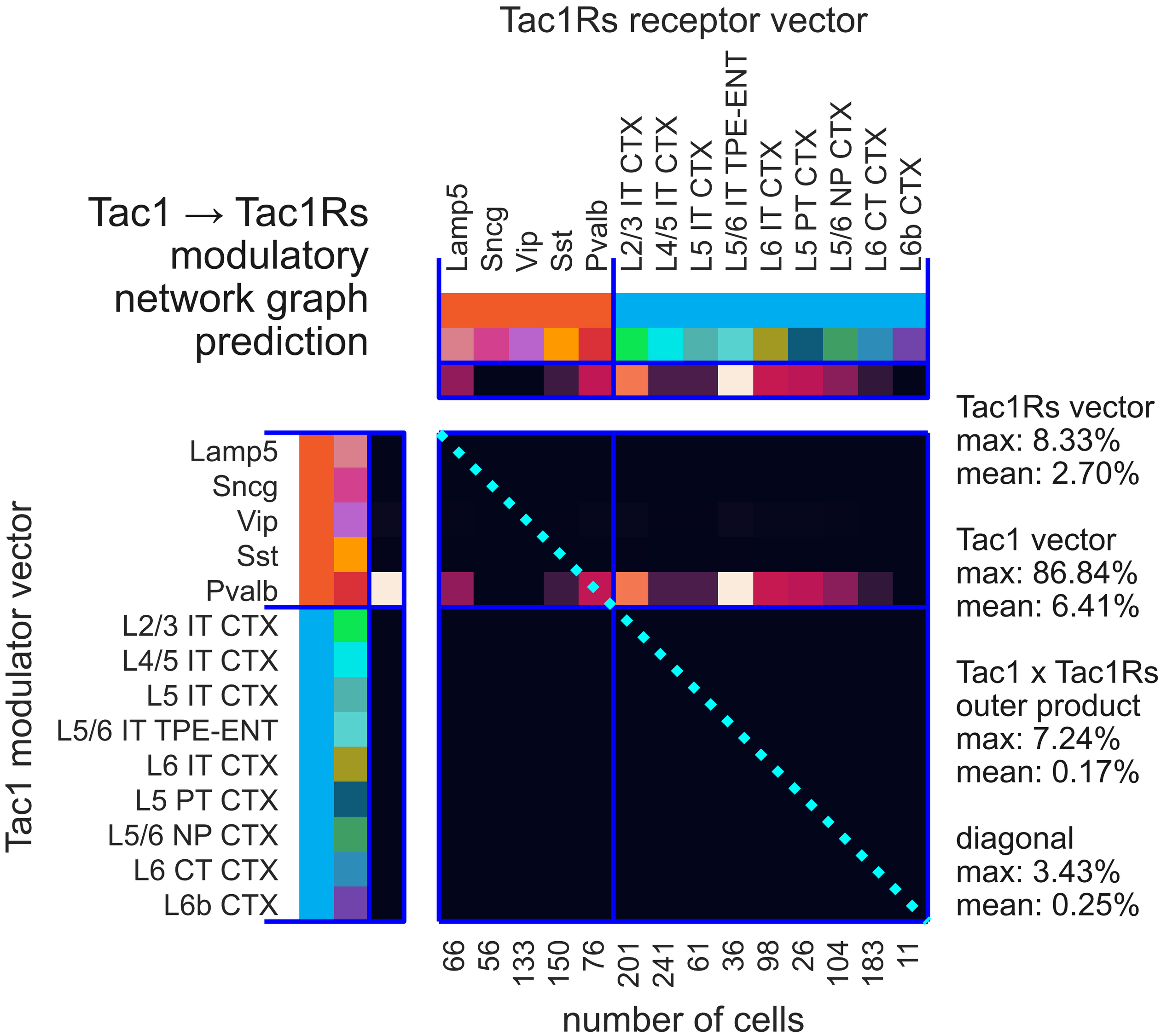
Tac1Rs vector
max: 96%
mean: 10%

Tac1 vector
max: 92%
mean: 7%

Tac1 x Tac1Rs
outer product
max: 89%
mean: 1%

diagonal
max: 15%
mean: 1%

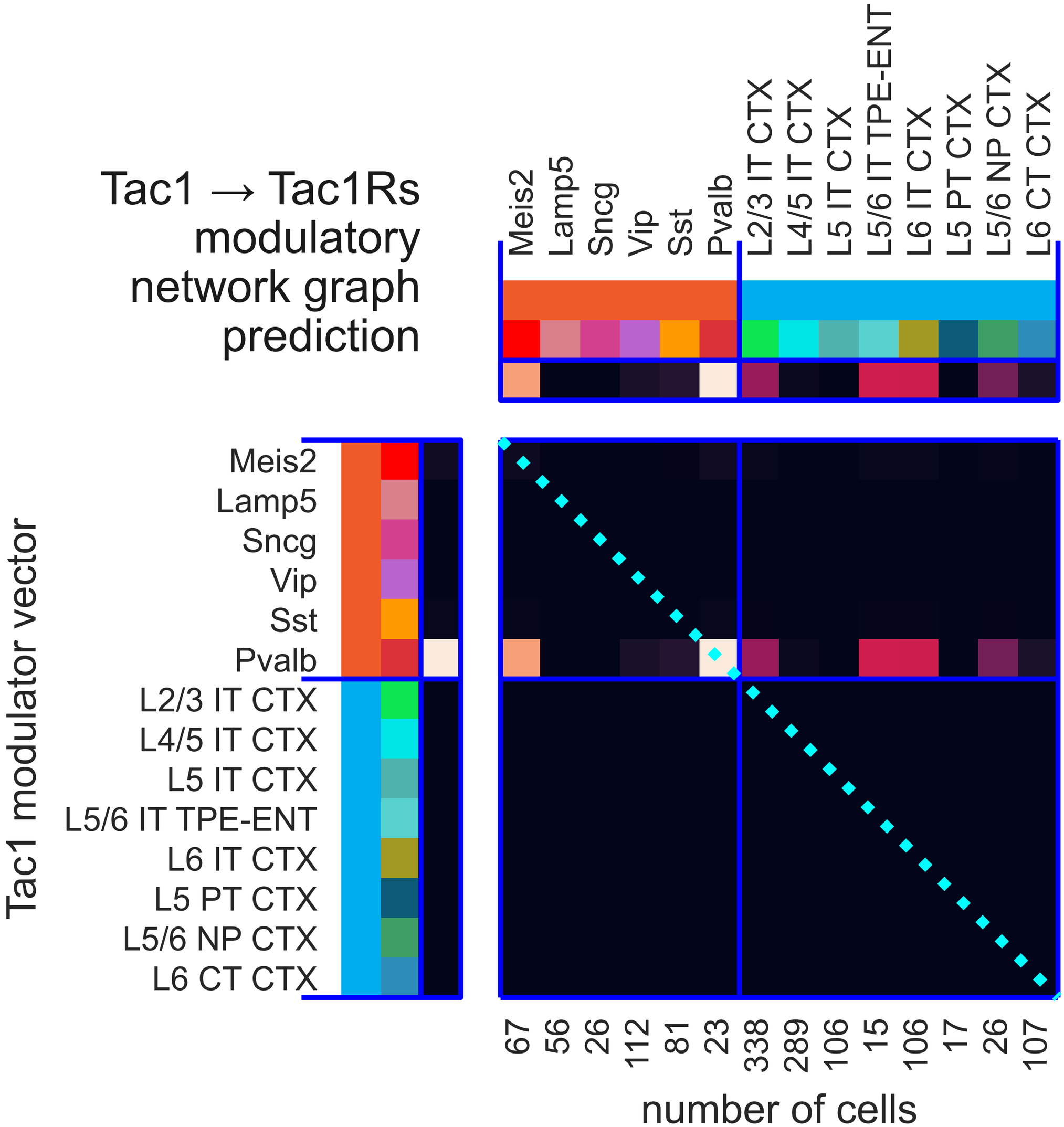
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)



Y21ss thr=10 sn:12402
Orbital Cortex (ORB)

Tac1Rs receptor vector

Tac1 → Tac1Rs
modulatory
network graph
prediction



Tac1Rs vector
max: 13.04%
mean: 3.50%

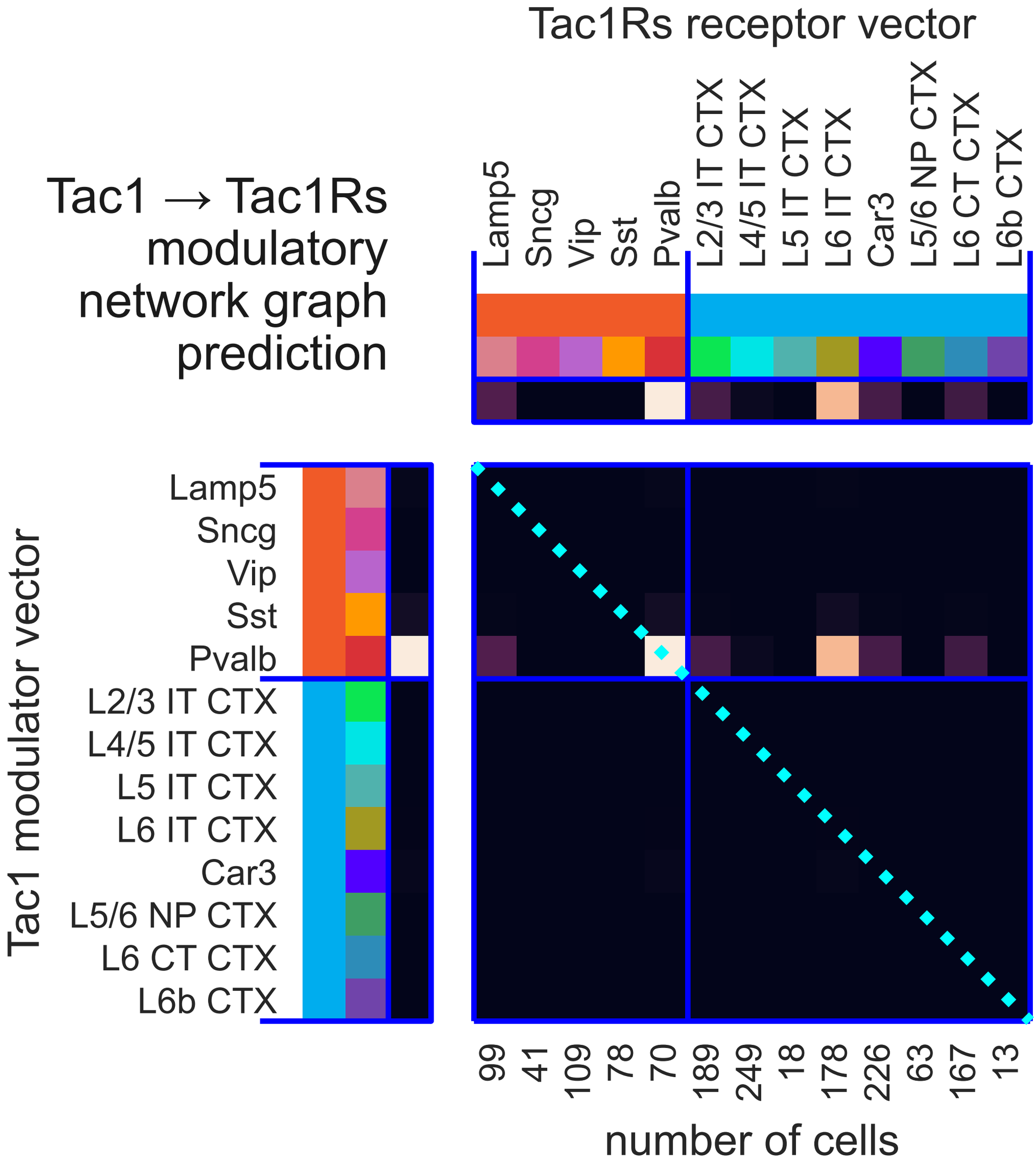
Tac1 vector
max: 69.57%
mean: 5.27%

Tac1 x Tac1Rs
outer product
max: 9.07%
mean: 0.18%

diagonal
max: 9.07%
mean: 0.67%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

Tac1 → Tac1Rs
modulatory
network graph
prediction



Tac1Rs vector
max: 14.29%
mean: 2.91%

Tac1 vector
max: 77.14%
mean: 6.45%

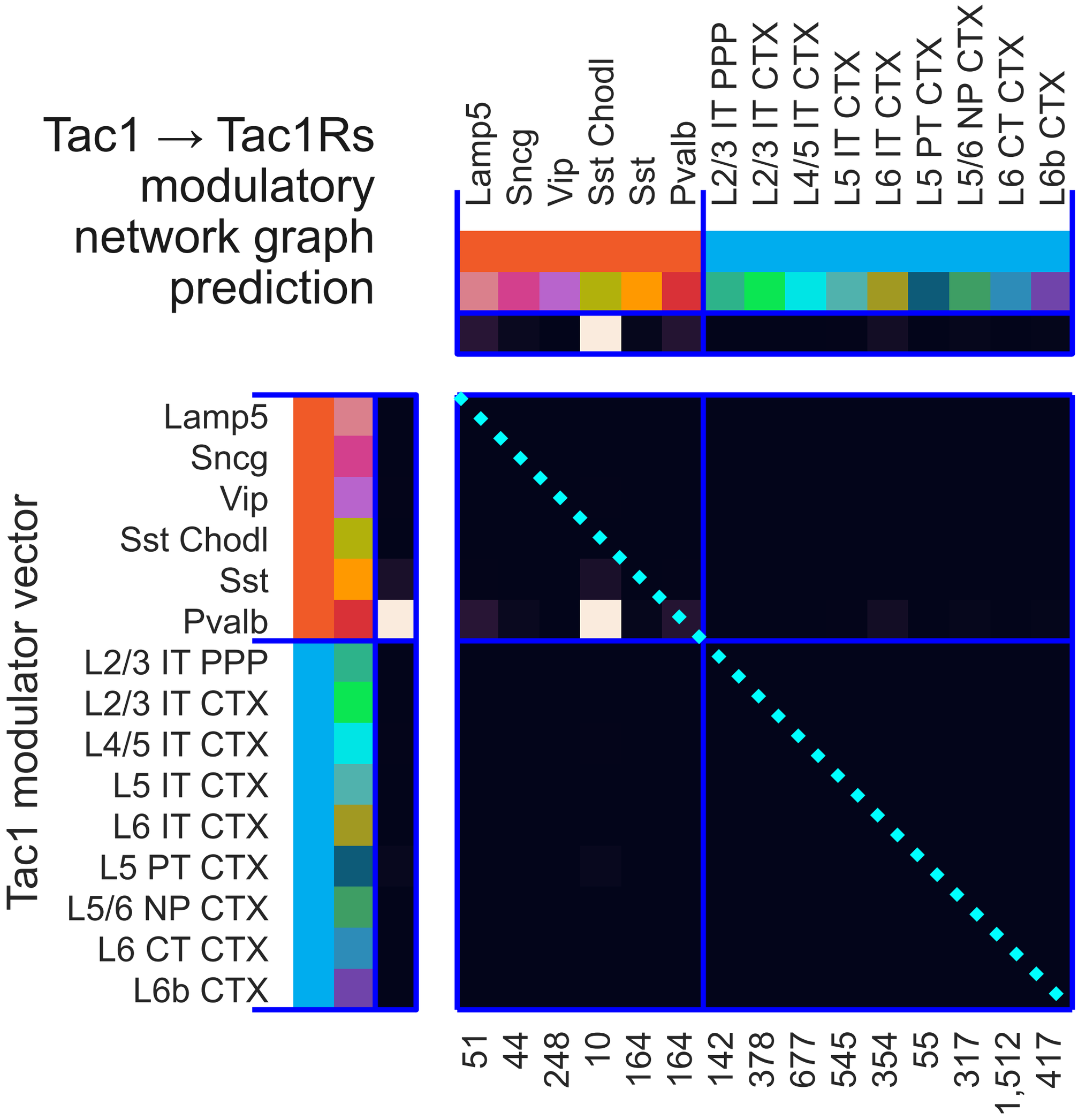
Tac1 x Tac1Rs
outer product
max: 11.02%
mean: 0.19%

diagonal
max: 11.02%
mean: 0.86%

Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

Tac1Rs receptor vector

Tac1 → Tac1Rs
modulatory
network graph
prediction

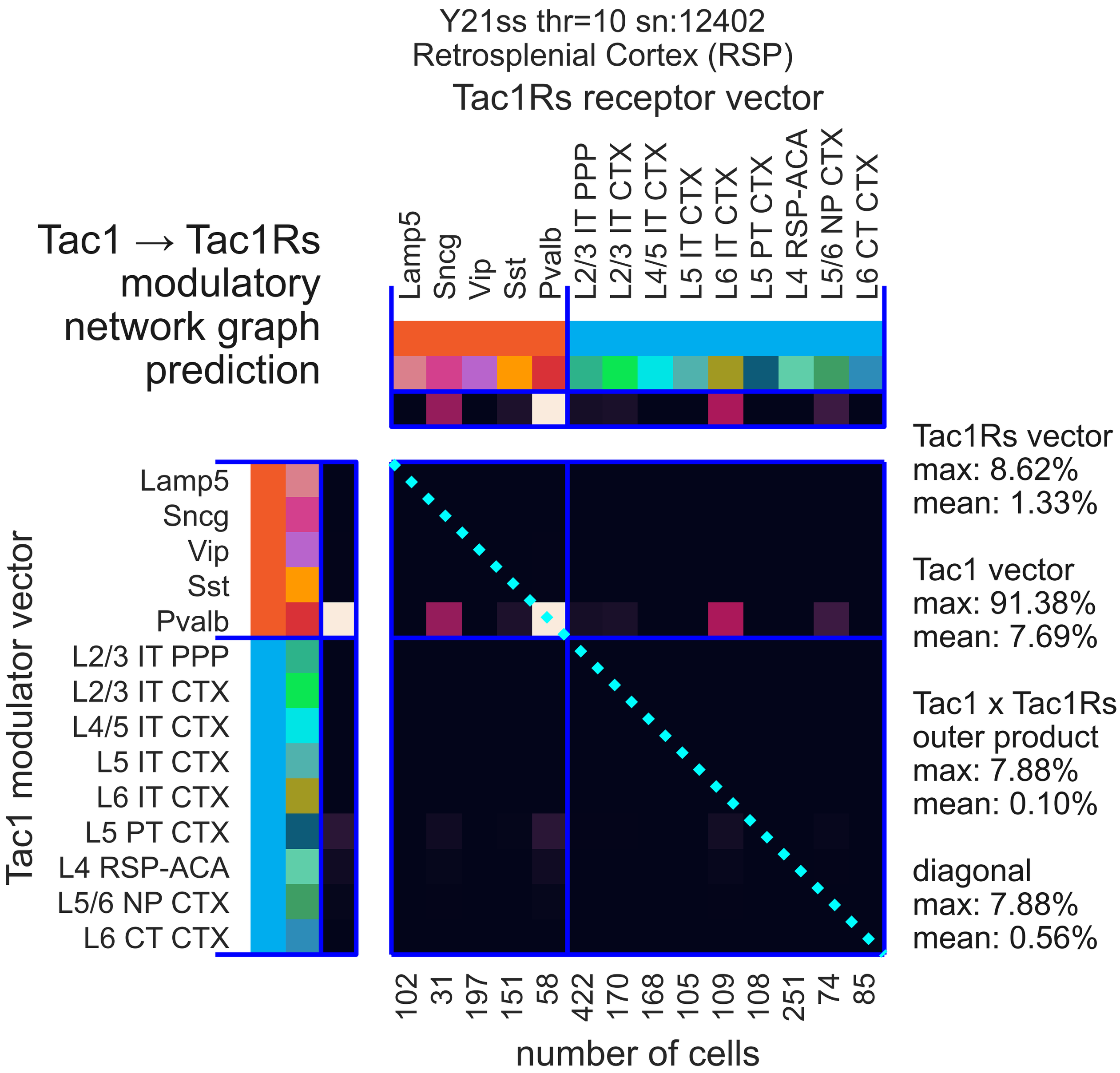


Tac1Rs vector
max: 90%
mean: 8%

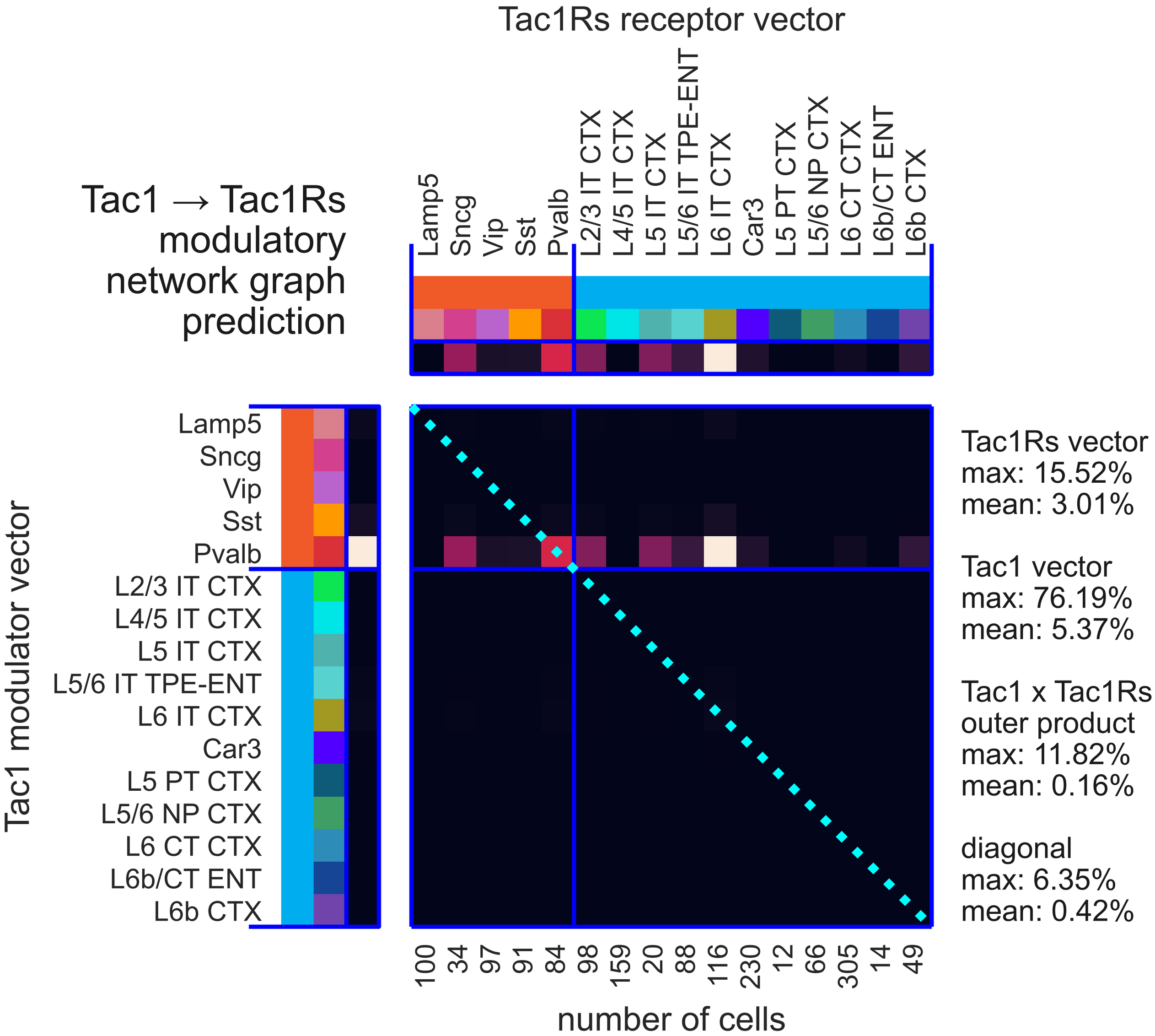
Tac1 vector
max: 91%
mean: 7%

Tac1 x Tac1Rs
outer product
max: 82%
mean: 1%

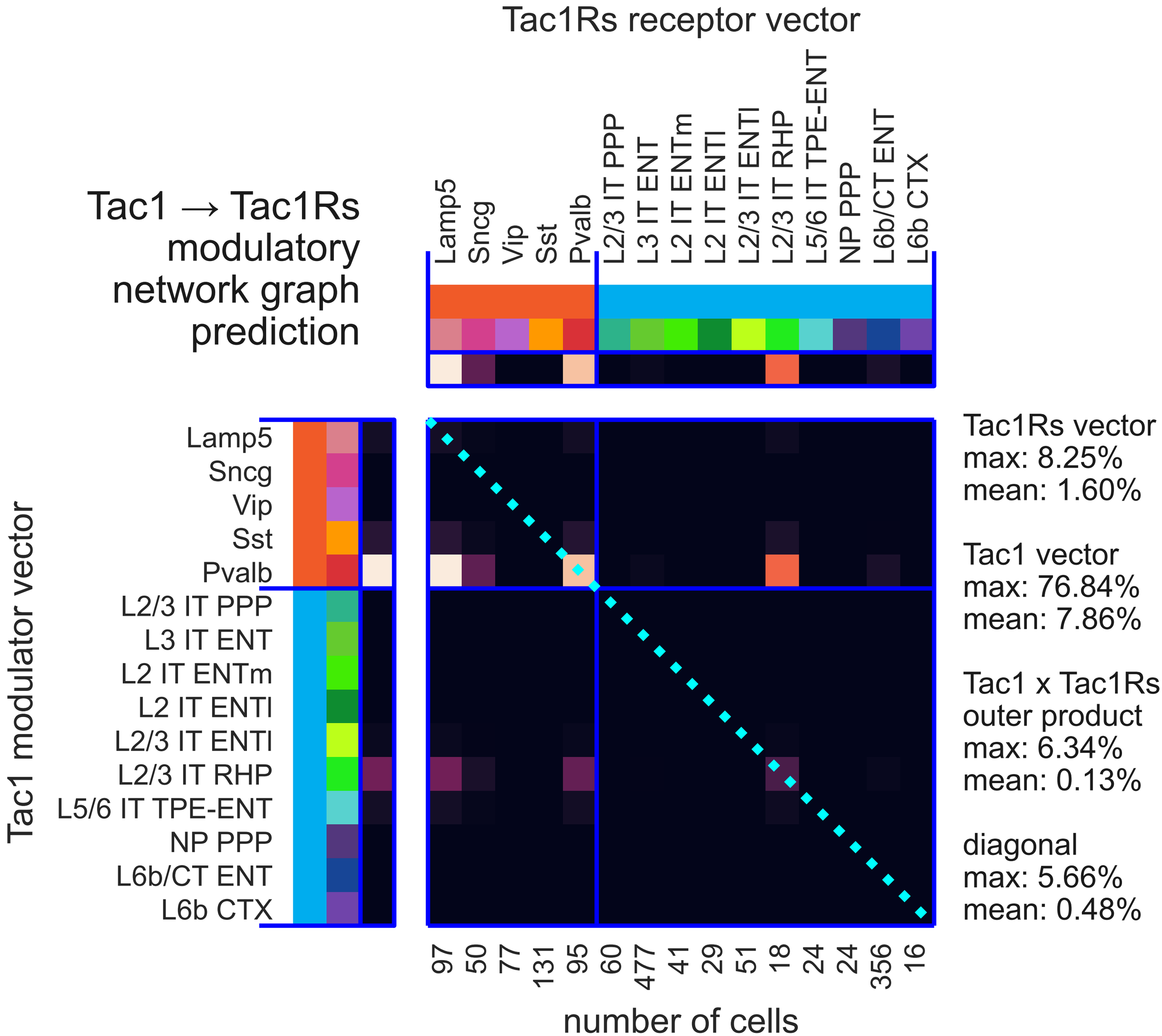
diagonal
max: 8%
mean: 1%


Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
Tac1Rs receptor vector
Tac1 → Tac1Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Tac1 modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
Tac1Rs vector
max: 8.62%
mean: 1.33%
Tac1 vector
max: 91.38%
mean: 7.69%
Tac1 x Tac1Rs
outer product
max: 7.88%
mean: 0.10%
diagonal
max: 7.88%
mean: 0.56%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)



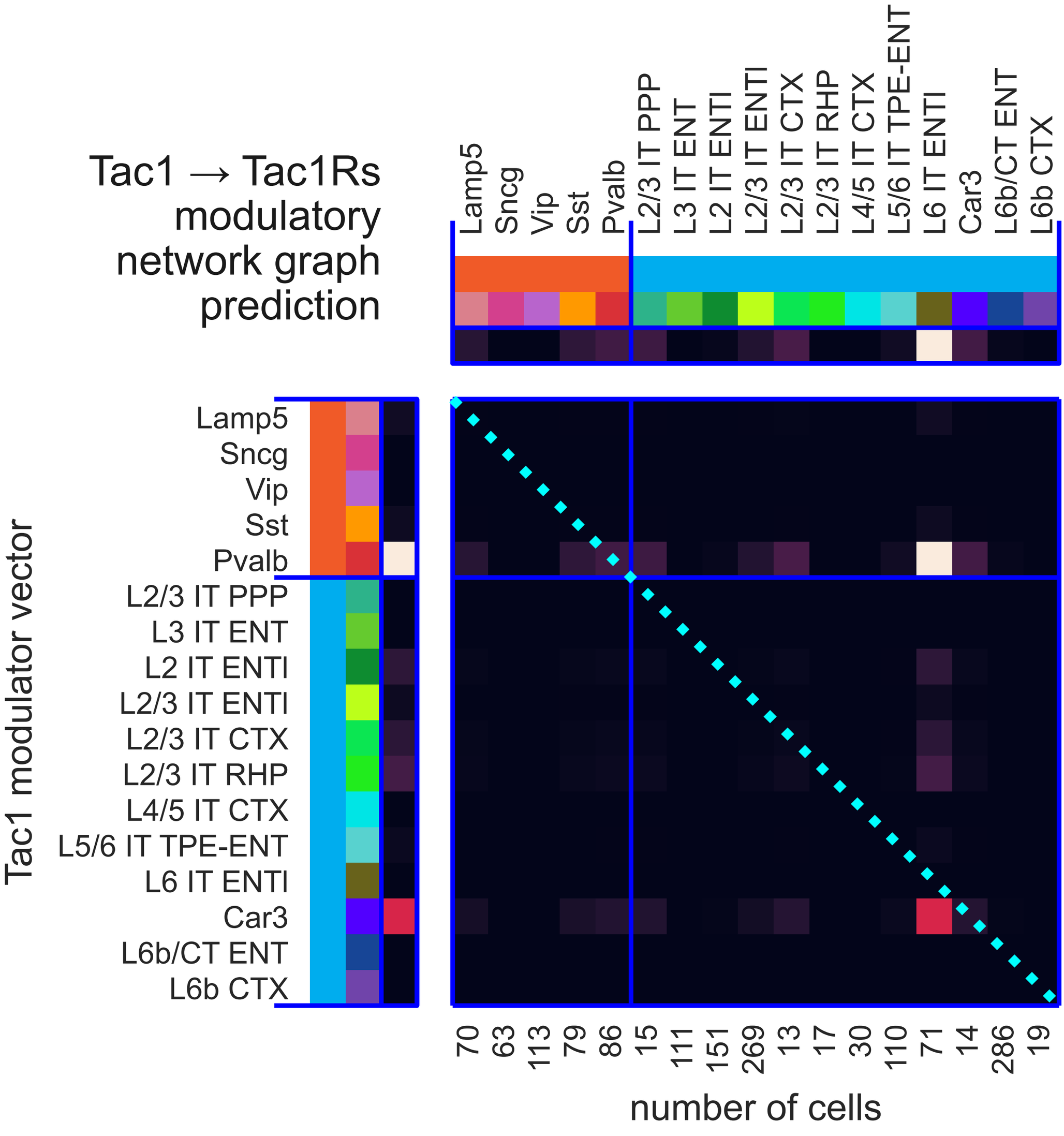
Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)

Tac1Rs receptor vector

Tac1 → Tac1Rs
modulatory
network graph
prediction



Tac1Rs vector
max: 41%
mean: 5%

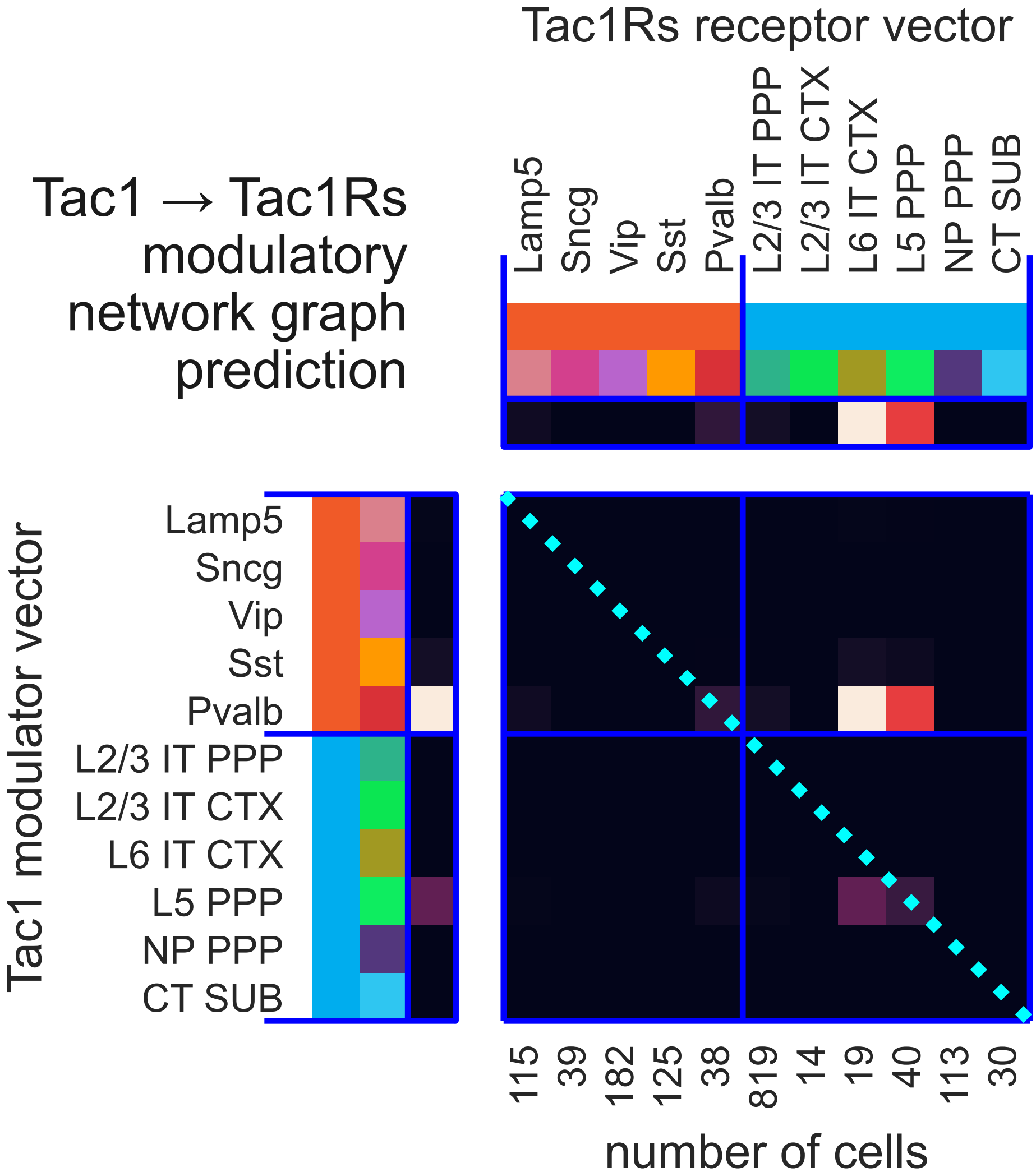
Tac1 vector
max: 66%
mean: 8%

Tac1 x Tac1Rs
outer product
max: 27%
mean: 0%

diagonal
max: 5%
mean: 0%

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

Tac1 → Tac1Rs
modulatory
network graph
prediction



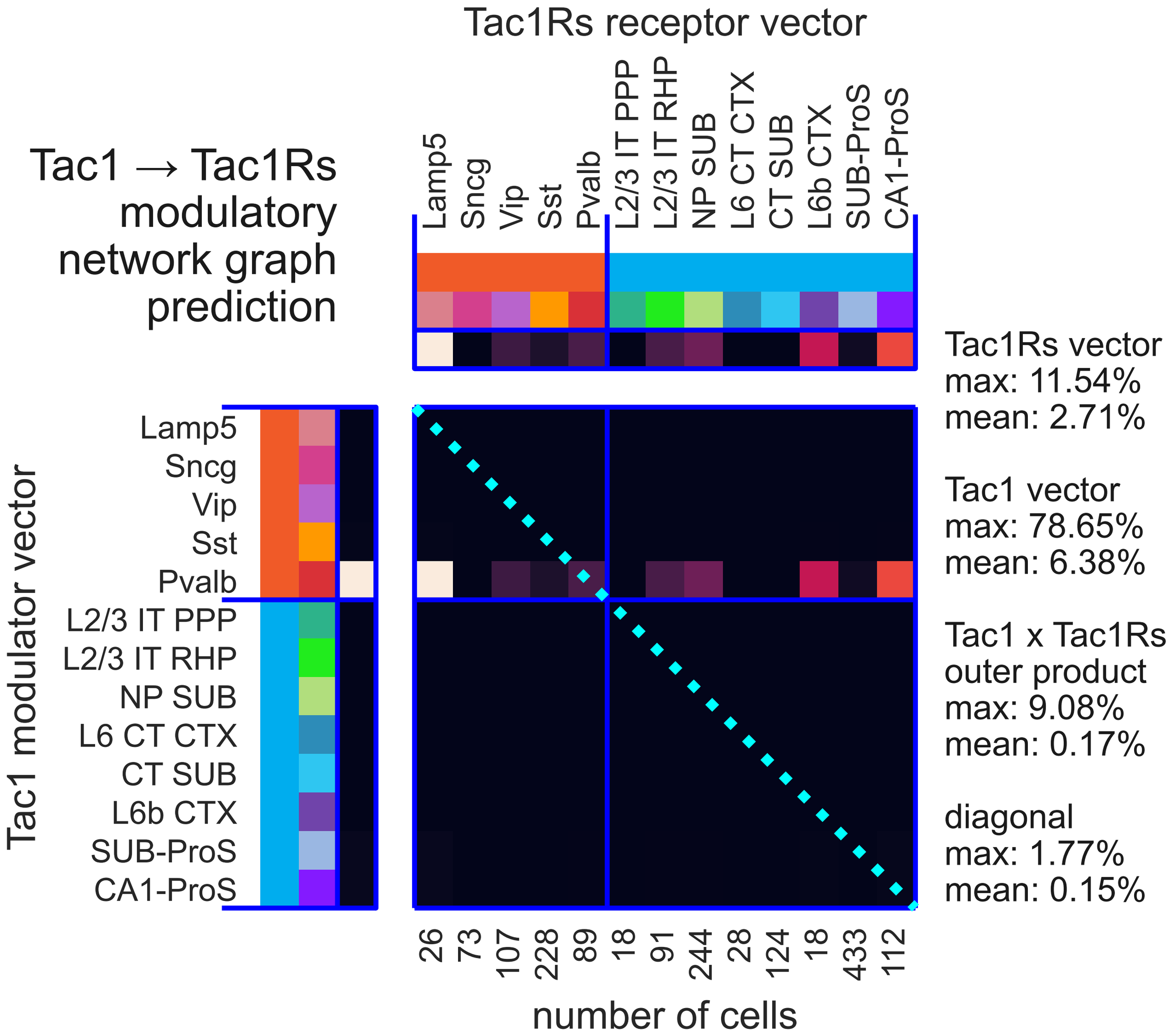
Tac1Rs vector
max: 21.05%
mean: 3.47%

Tac1 vector
max: 89.47%
mean: 10.69%

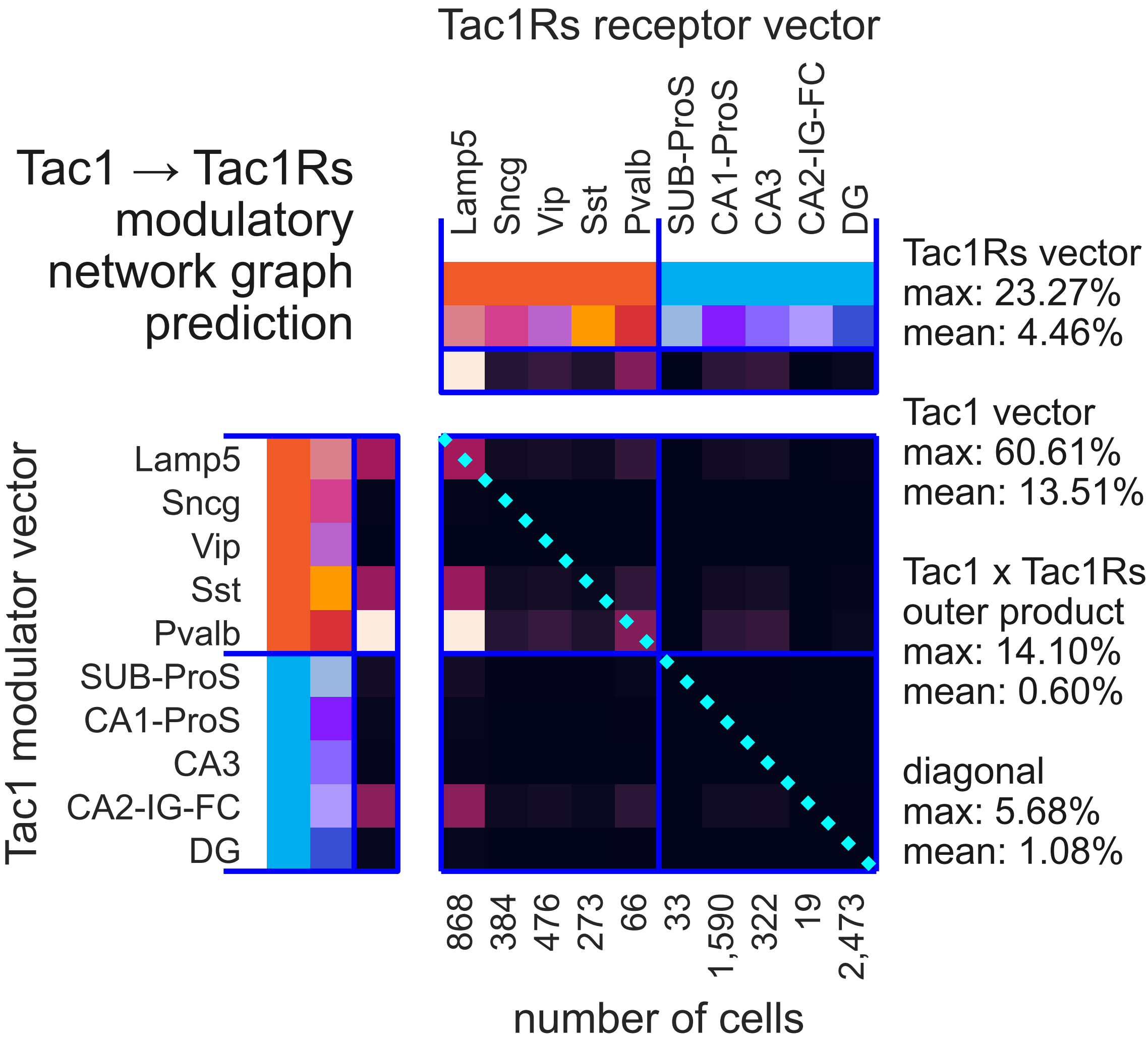
Tac1 x Tac1Rs
outer product
max: 18.84%
mean: 0.37%

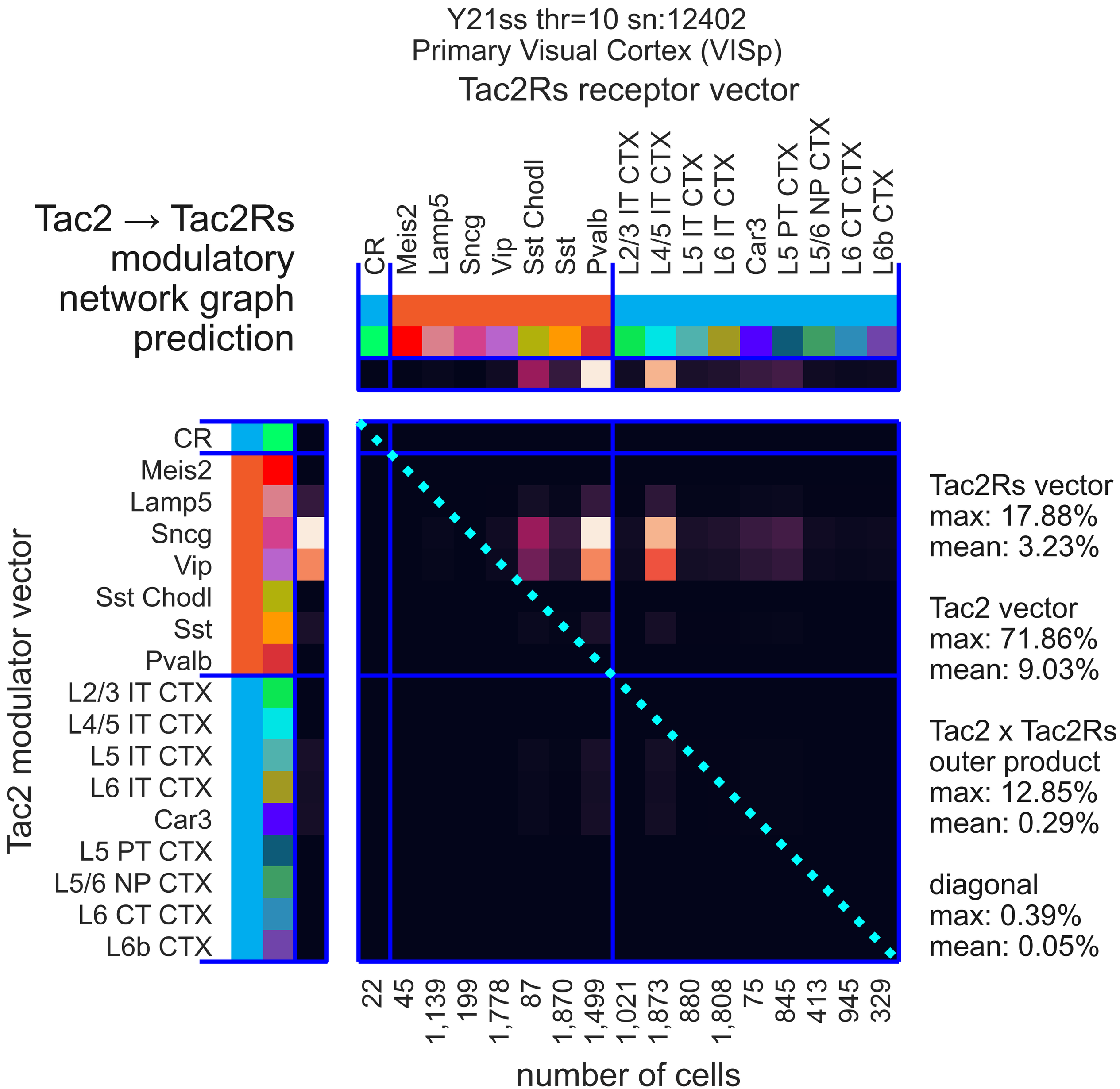
diagonal
max: 2.81%
mean: 0.47%

Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



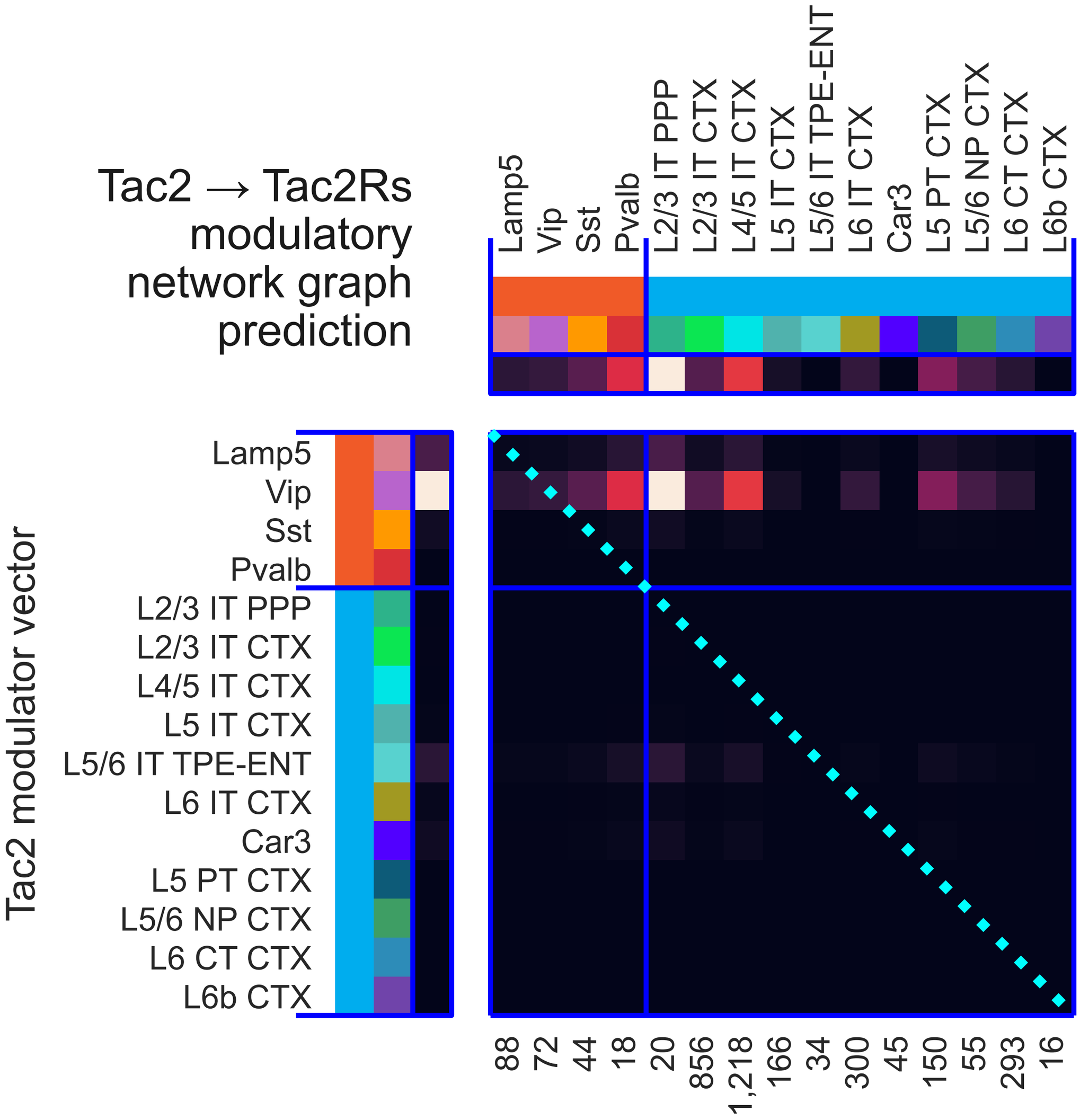
Y21ss thr=10 sn:12402
Hippocampus (HIP)




Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
Tac2Rs receptor vector
Tac2 → Tac2Rs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Tac2 modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
Tac2Rs vector
max: 17.88%
mean: 3.23%
Tac2 vector
max: 71.86%
mean: 9.03%
Tac2 x Tac2Rs
outer product
max: 12.85%
mean: 0.29%
diagonal
max: 0.39%
mean: 0.05%

Y21ss thr=10 sn:12402
Visual Cortex (VIS)

Tac2 → Tac2Rs
modulatory
network graph
prediction



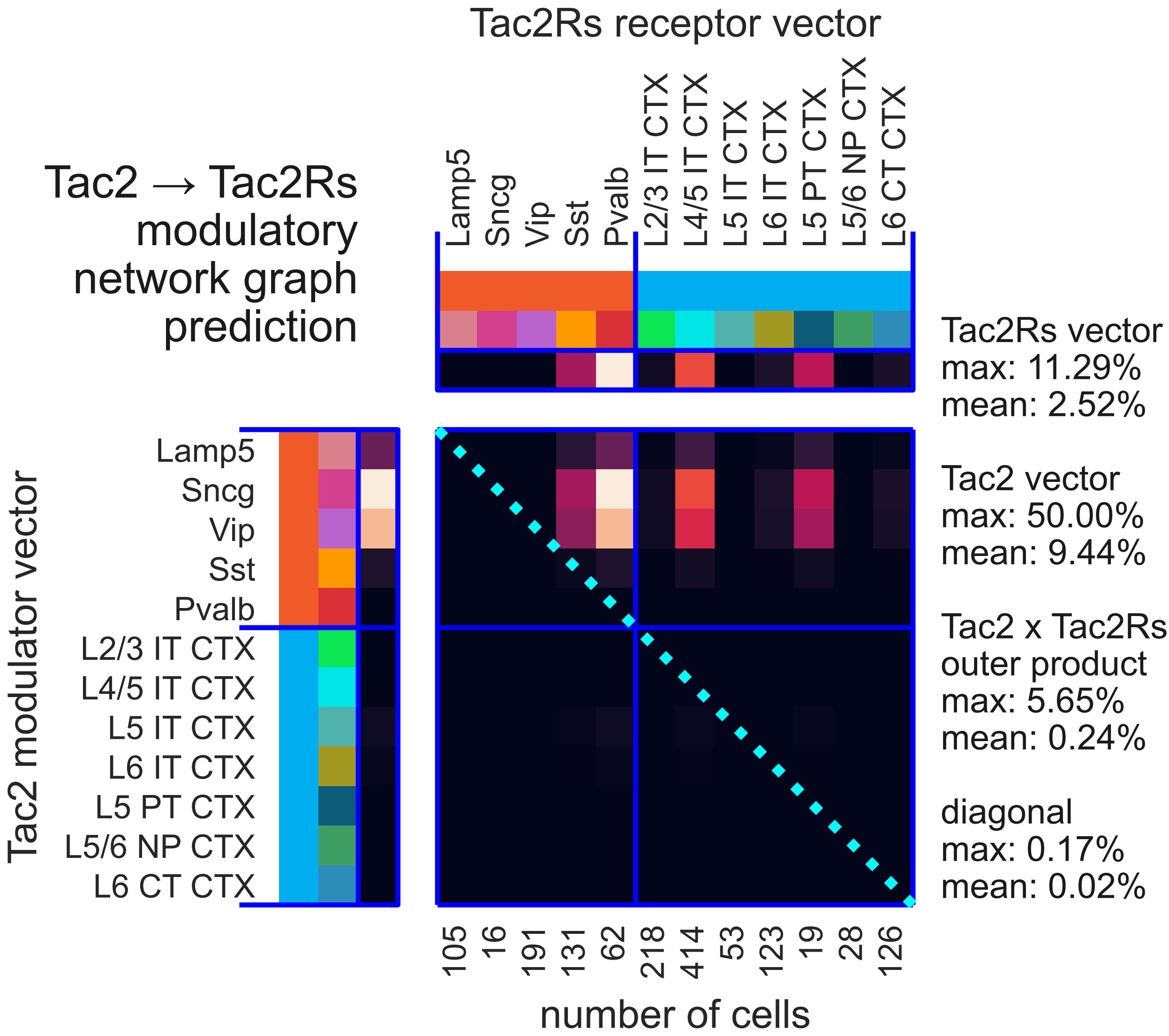
Tac2Rs vector
max: 10.00%
mean: 2.43%

Tac2 vector
max: 52.78%
mean: 5.02%

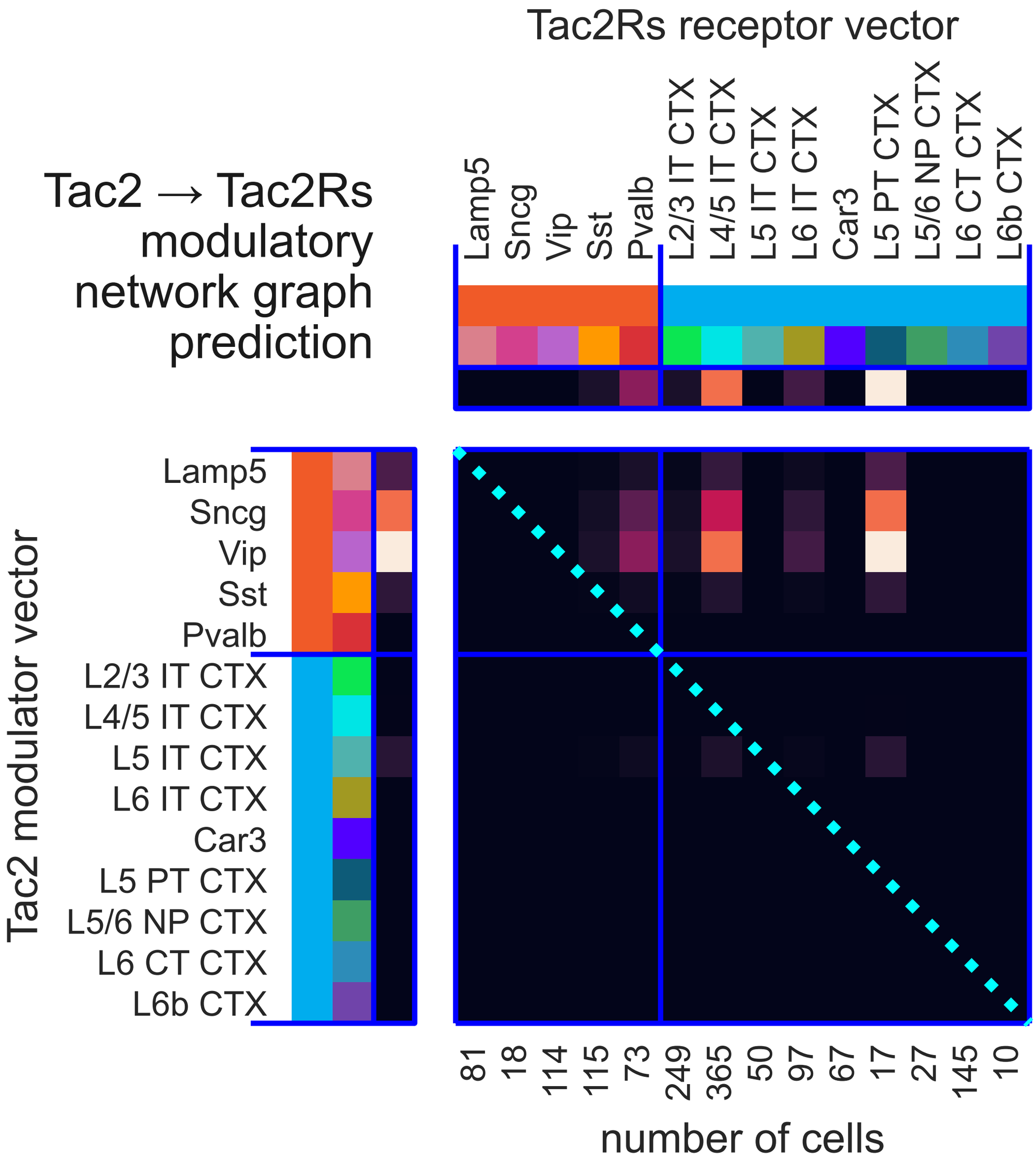
Tac2 x Tac2Rs
outer product
max: 5.28%
mean: 0.12%

diagonal
max: 0.73%
mean: 0.06%

Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)



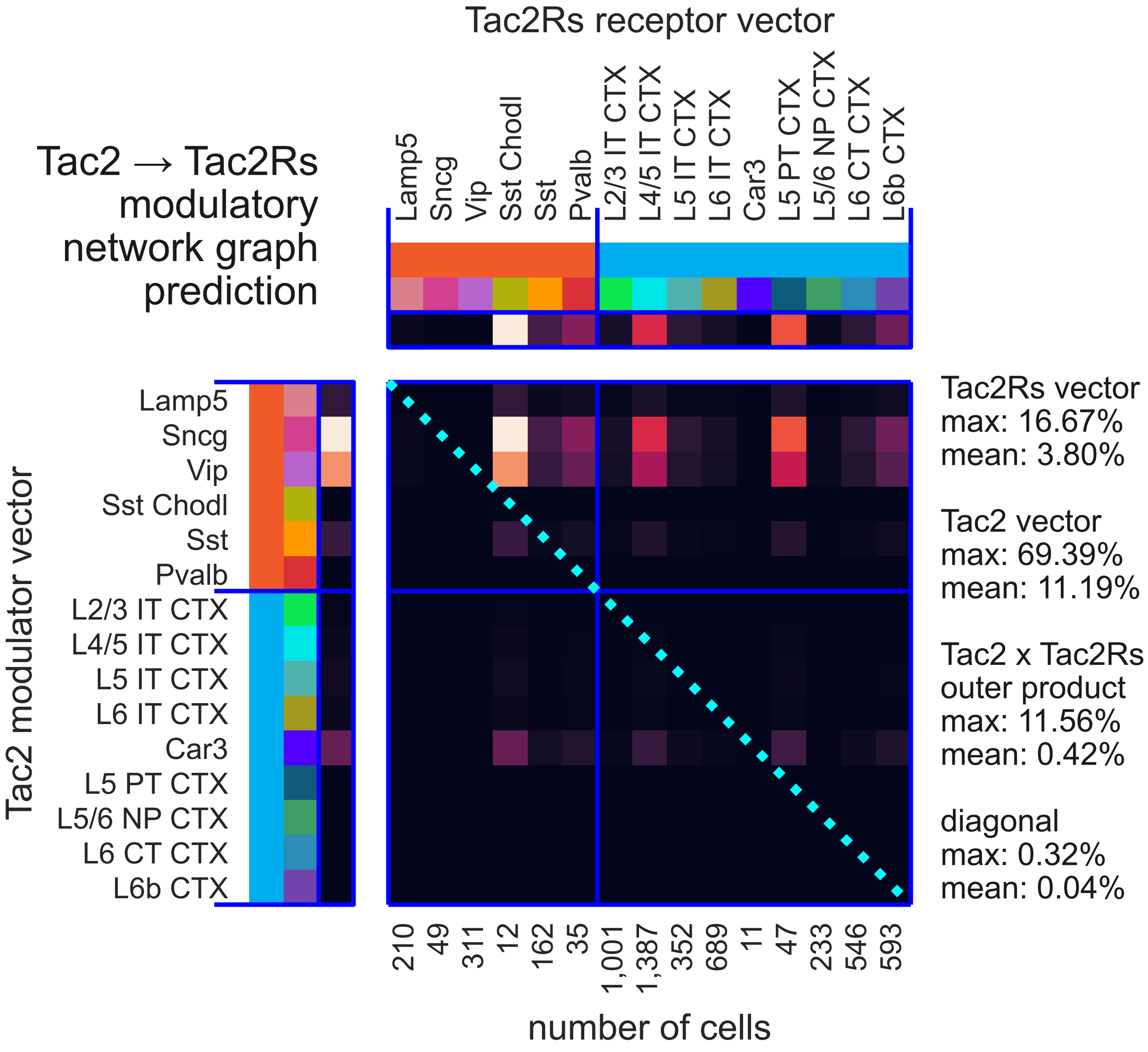
Tac2Rs vector
max: 11.76%
mean: 1.99%

Tac2 vector
max: 56.14%
mean: 8.53%

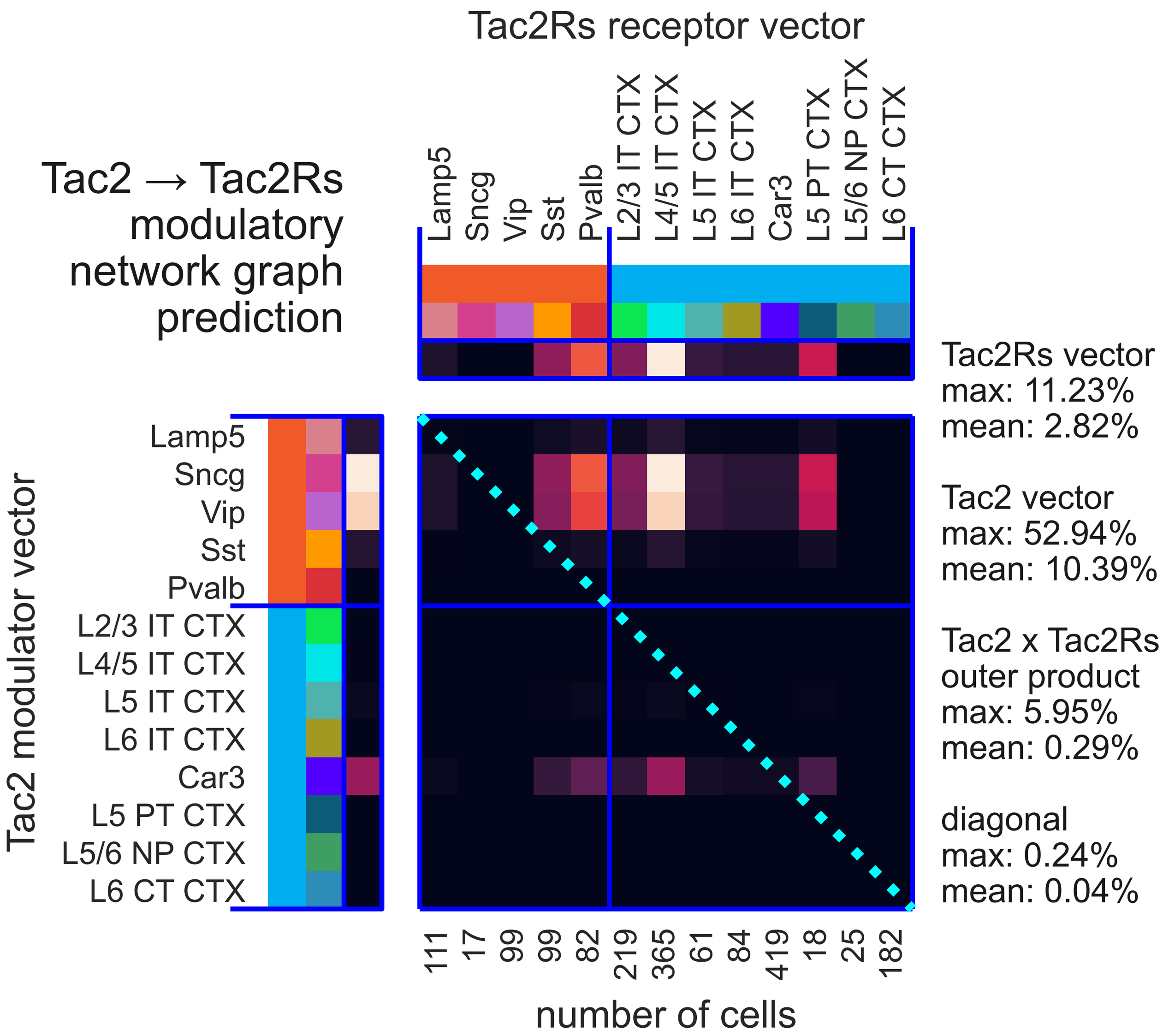
Tac2 x Tac2Rs
outer product
max: 6.60%
mean: 0.17%

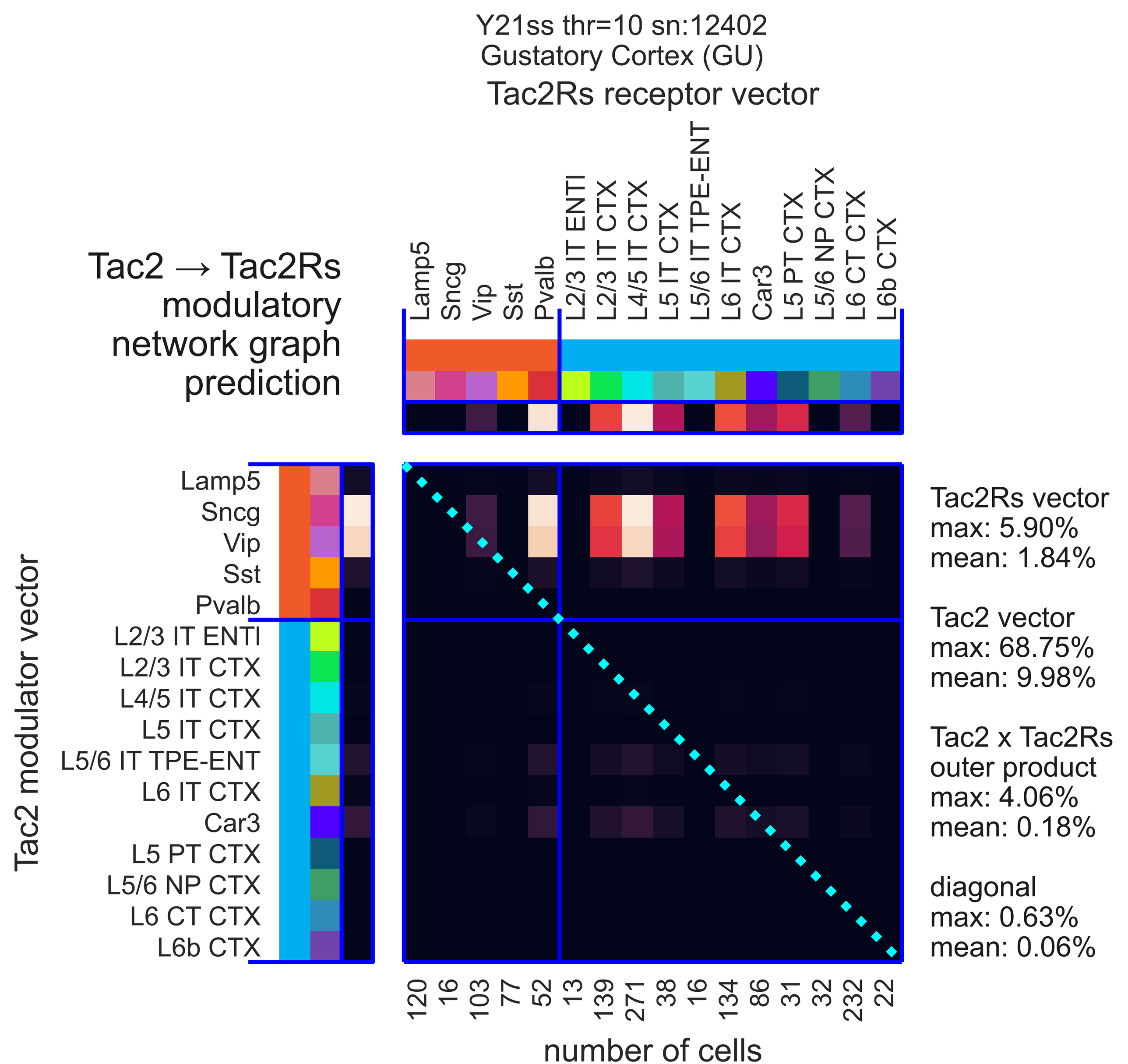
diagonal
max: 0.06%
mean: 0.01%

Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



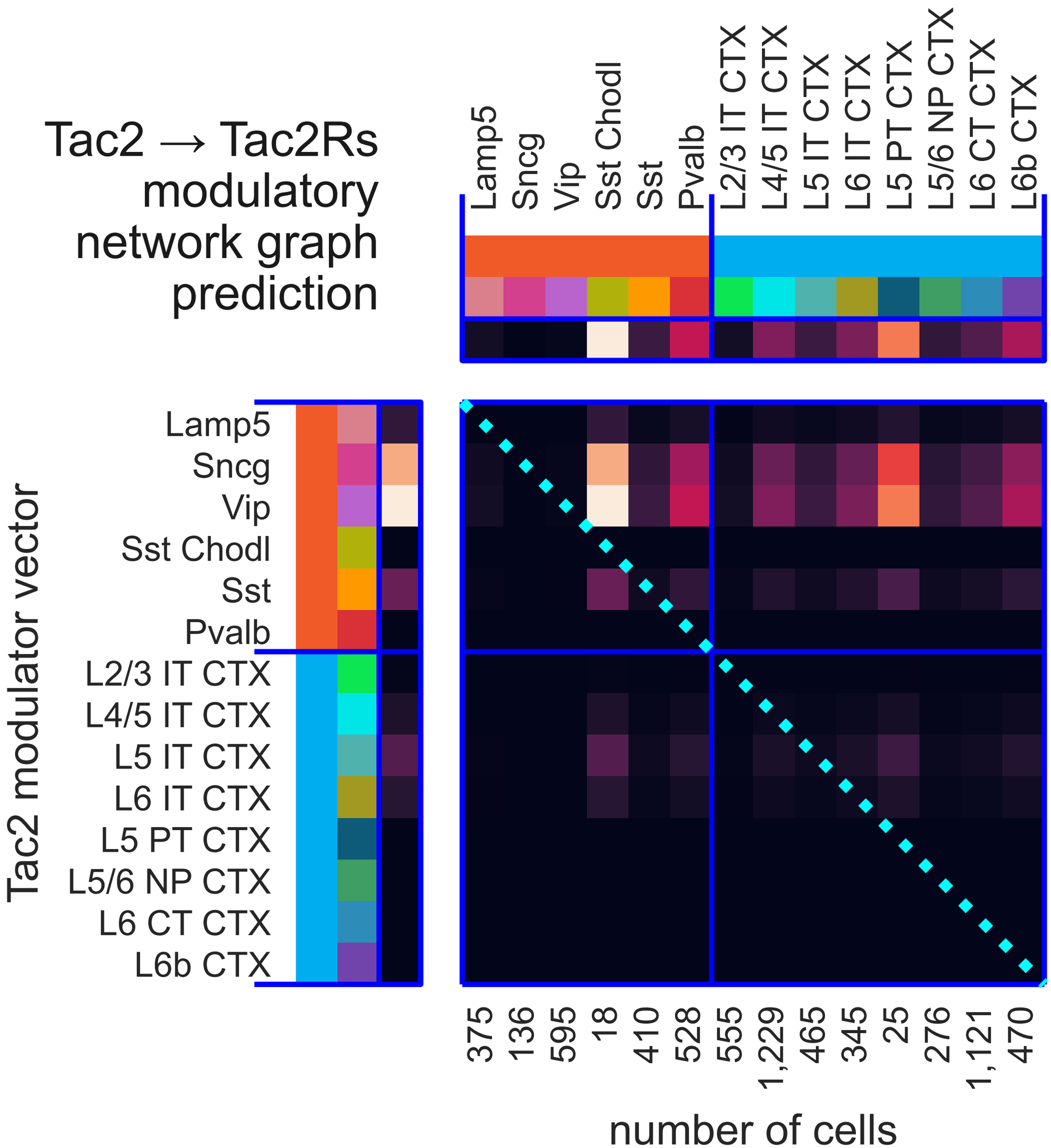
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)




Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
Tac2Rs receptor vector
Tac2 → Tac2Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Tac2 modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
Tac2Rs vector
max: 5.90%
mean: 1.84%
Tac2 vector
max: 68.75%
mean: 9.98%
Tac2 x Tac2Rs
outer product
max: 4.06%
mean: 0.18%
diagonal
max: 0.63%
mean: 0.06%

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)

Tac2 → Tac2Rs
modulatory
network graph
prediction



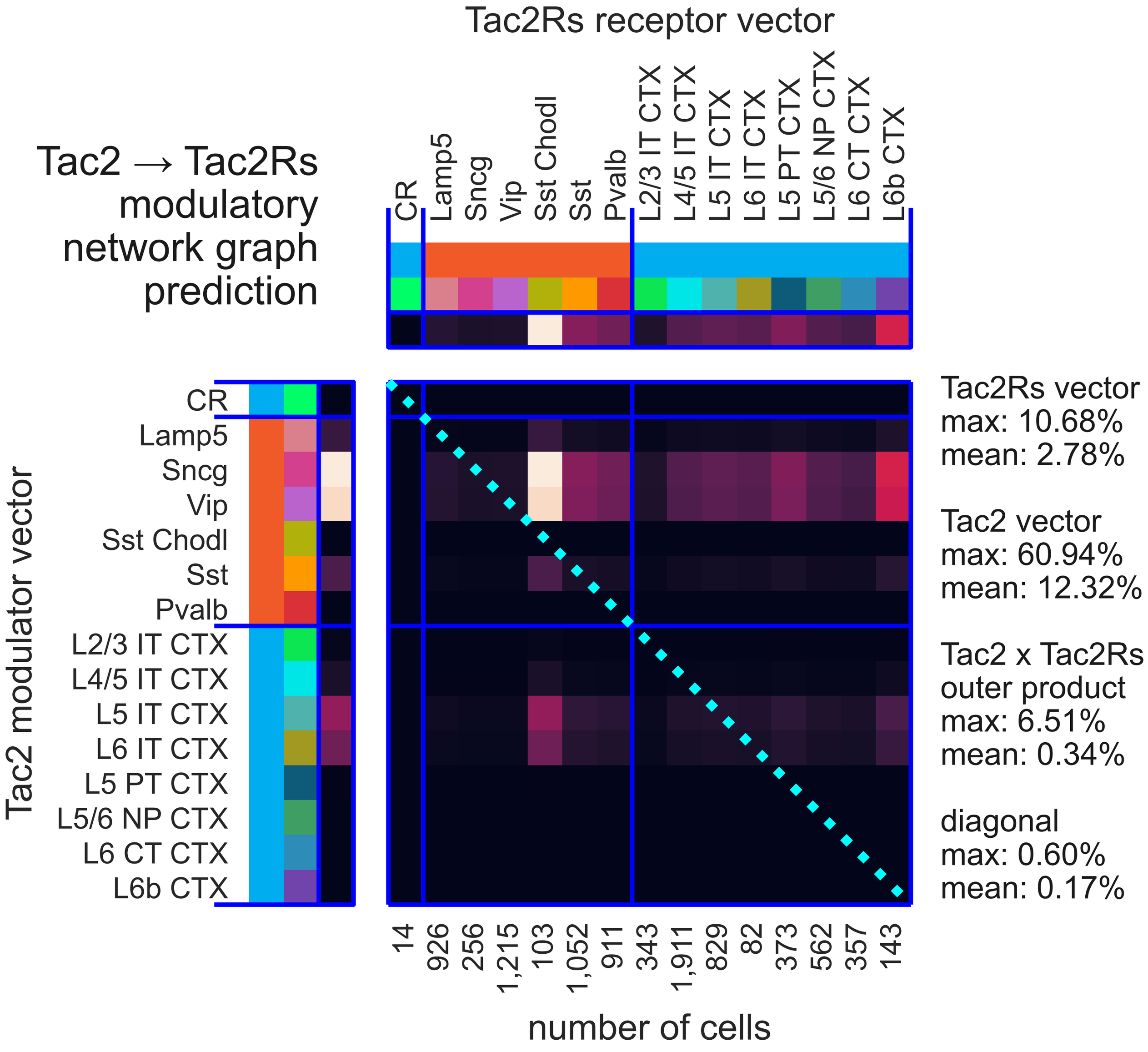
Tac2Rs vector
max: 11.11%
mean: 3.19%

Tac2 vector
max: 55.46%
mean: 10.48%

Tac2 x Tac2Rs
outer product
max: 6.16%
mean: 0.33%

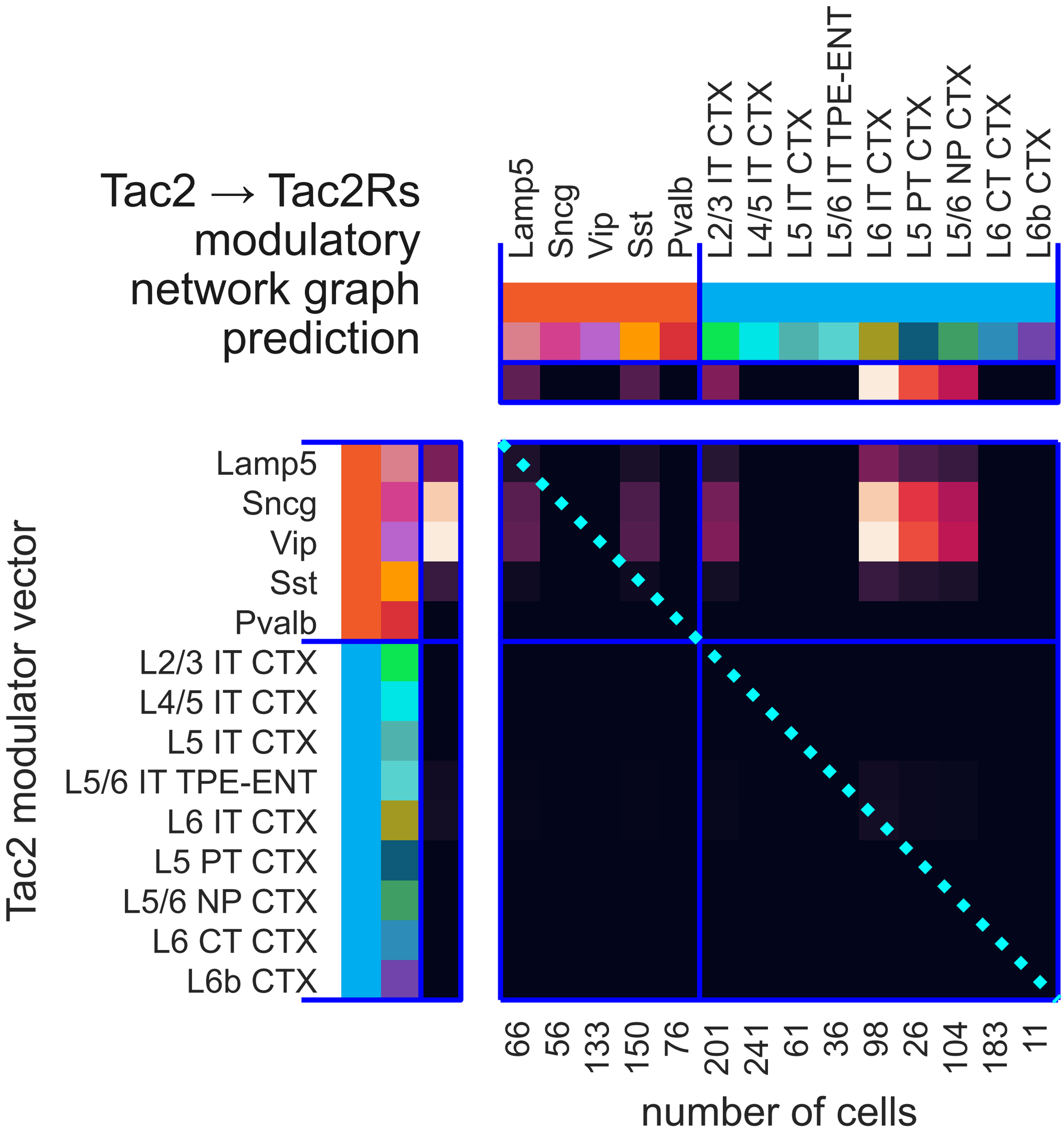
diagonal
max: 0.25%
mean: 0.07%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

Tac2 → Tac2Rs
modulatory
network graph
prediction

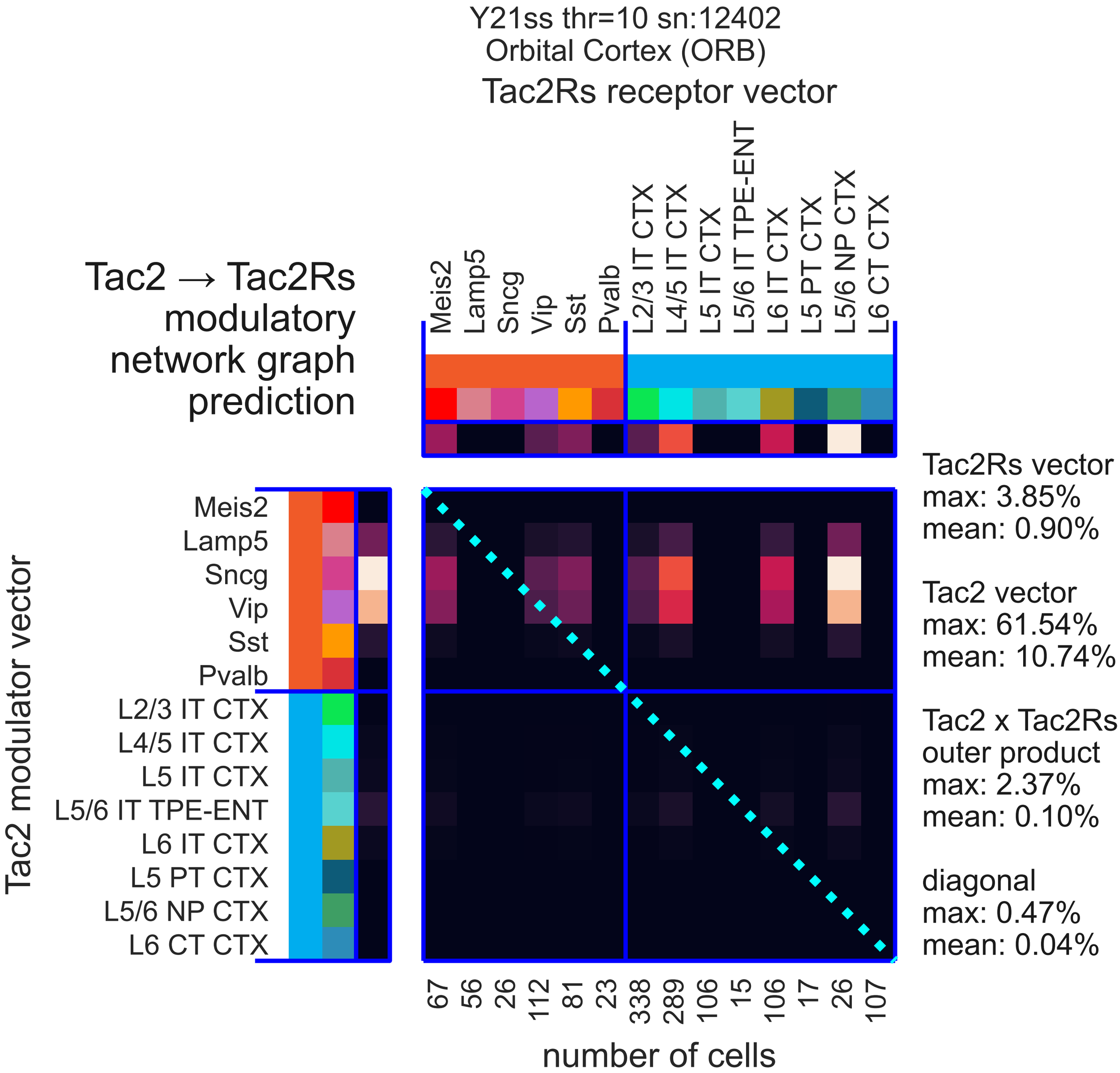


Tac2Rs vector
max: 6.12%
mean: 1.26%

Tac2 vector
max: 62.41%
mean: 11.03%

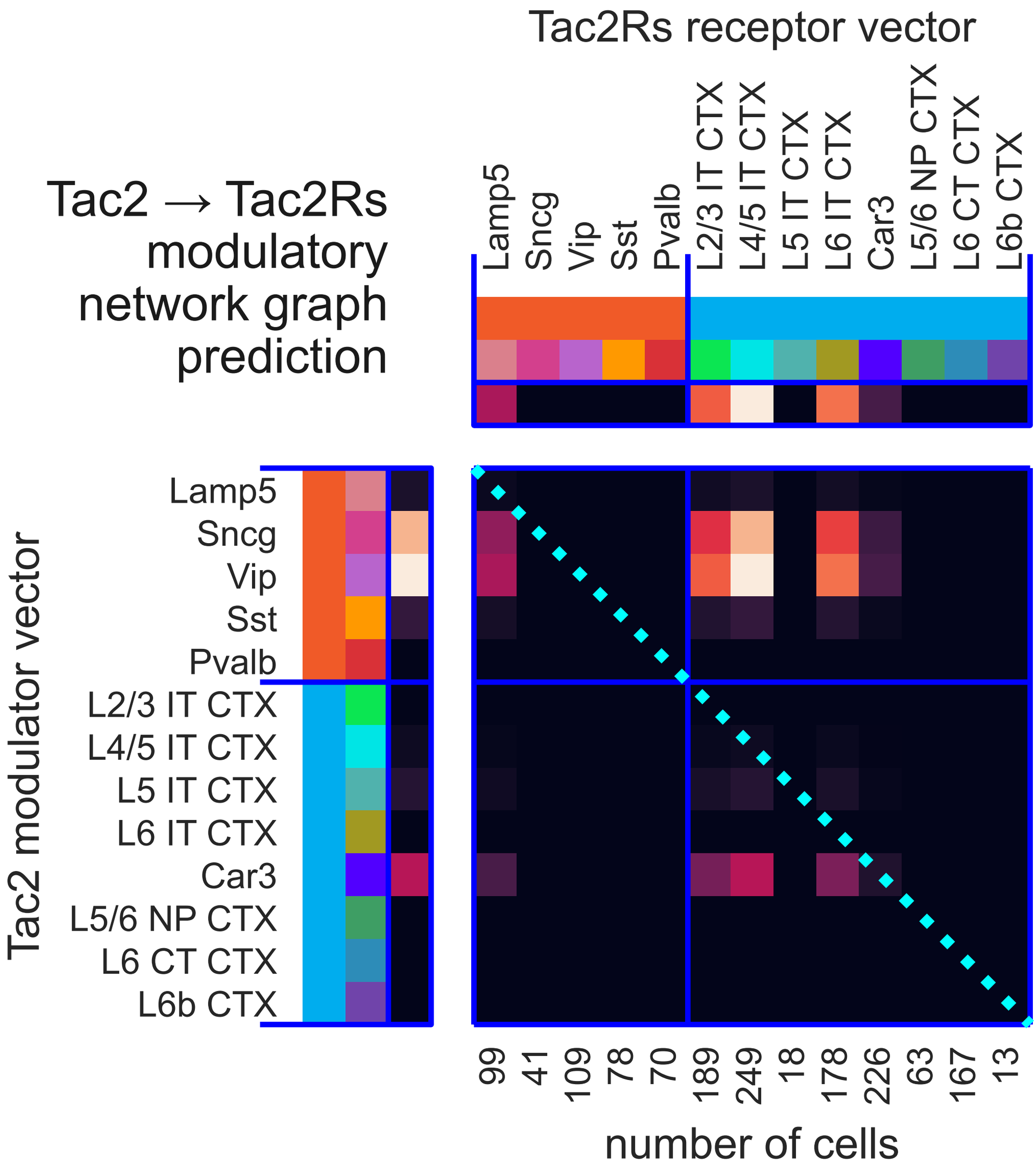
Tac2 x Tac2Rs
outer product
max: 3.82%
mean: 0.14%

diagonal
max: 0.30%
mean: 0.04%


Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
Tac2Rs receptor vector
Tac2 → Tac2Rs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Tac2 modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
Tac2Rs vector
max: 3.85%
mean: 0.90%
Tac2 vector
max: 61.54%
mean: 10.74%
Tac2 x Tac2Rs
outer product
max: 2.37%
mean: 0.10%
diagonal
max: 0.47%
mean: 0.04%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

Tac2 → Tac2Rs
modulatory
network graph
prediction



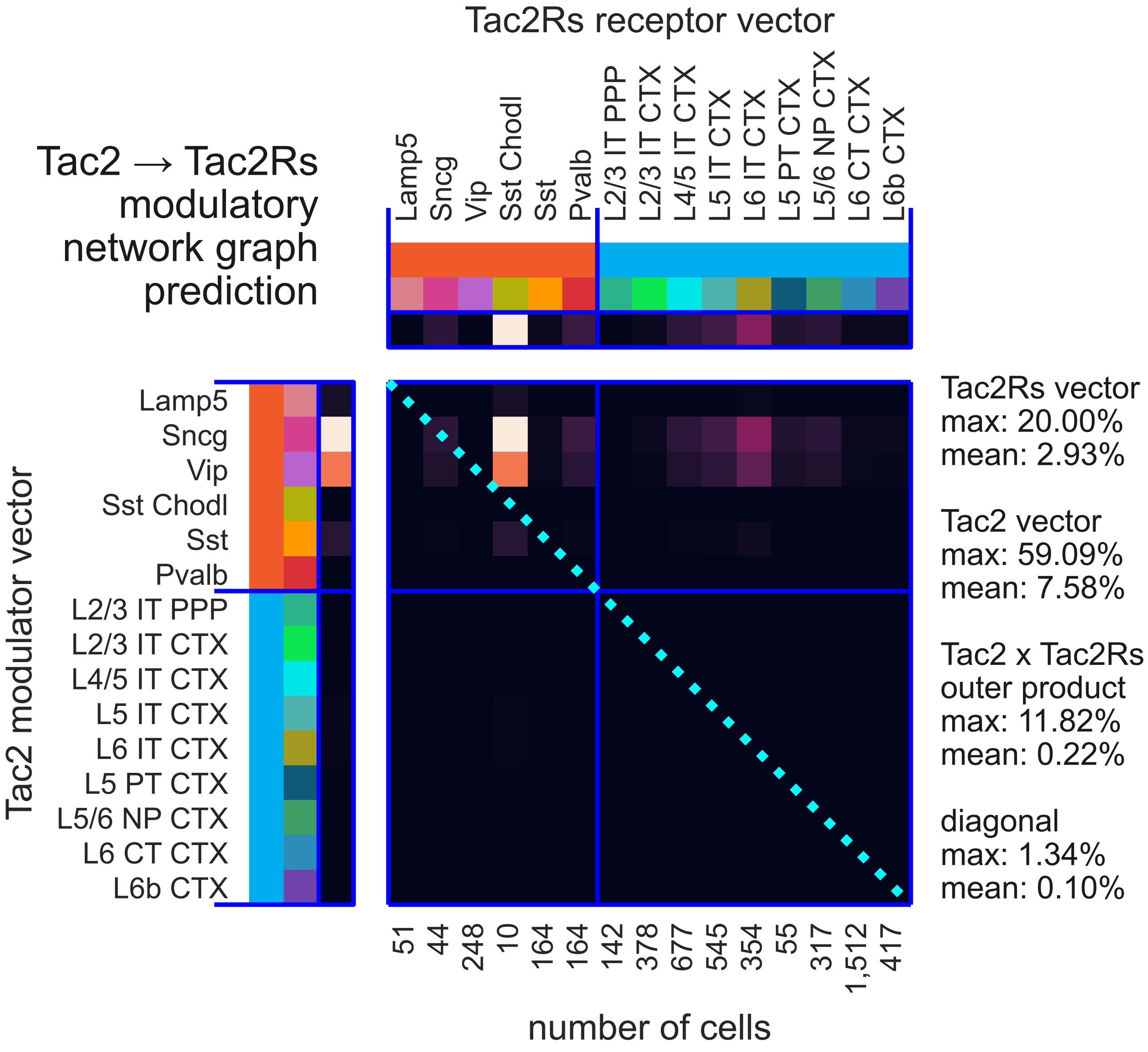
Tac2Rs vector
max: 2.41%
mean: 0.55%

Tac2 vector
max: 56.88%
mean: 11.59%

Tac2 x Tac2Rs
outer product
max: 1.37%
mean: 0.06%

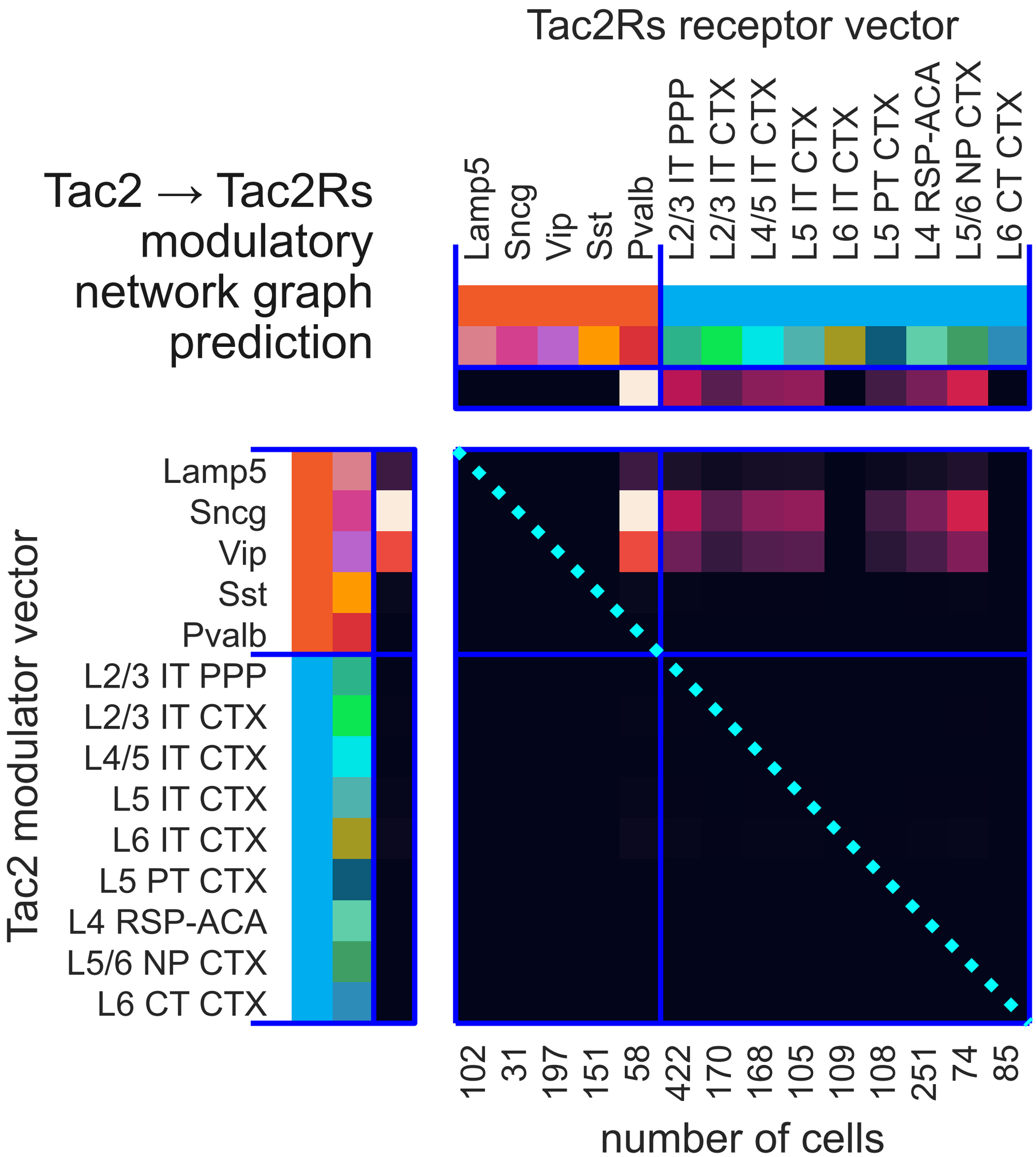
diagonal
max: 0.11%
mean: 0.02%

Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)



Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)

Tac2 → Tac2Rs
modulatory
network graph
prediction



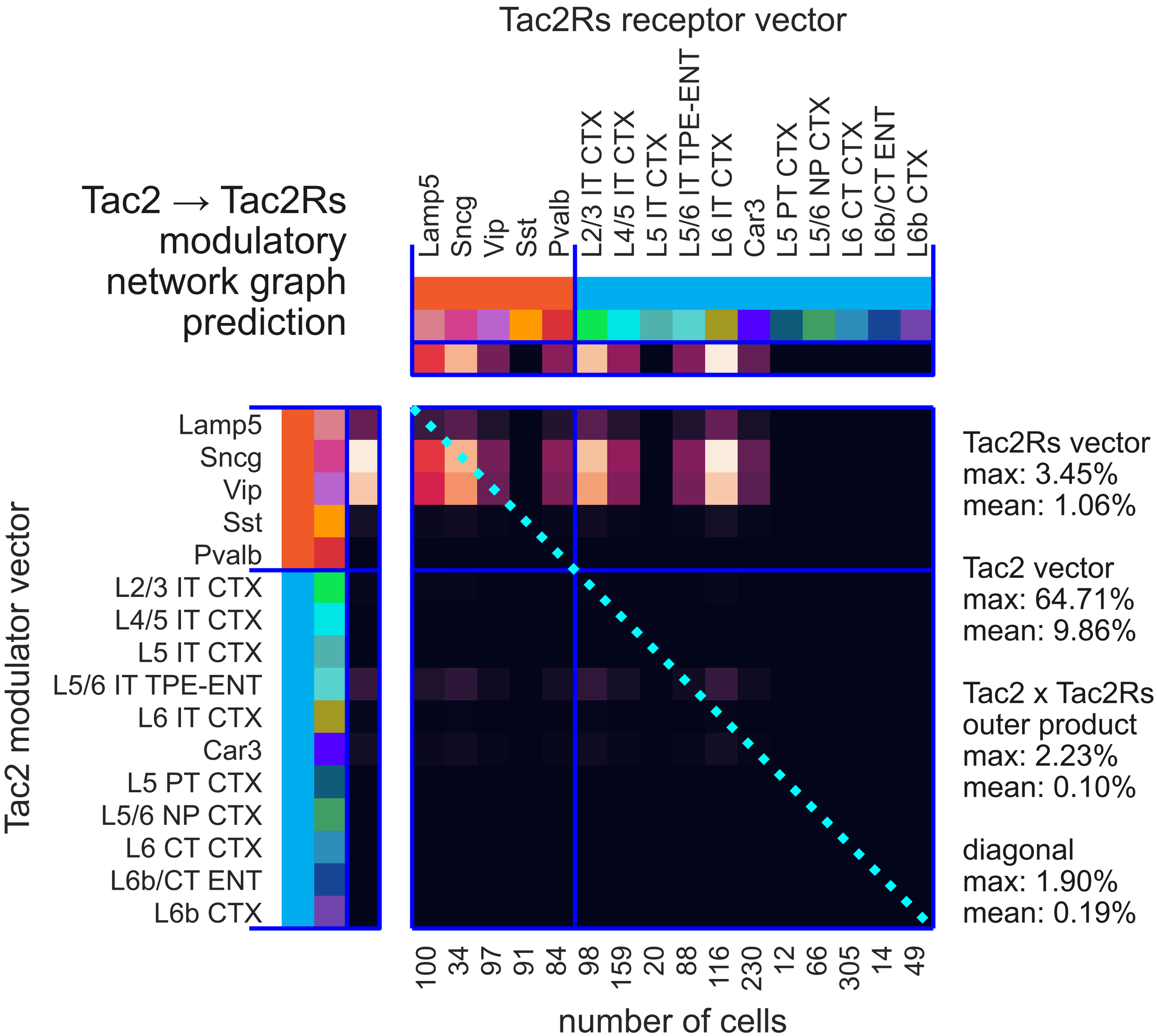
Tac2Rs vector
max: 5.17%
mean: 1.26%

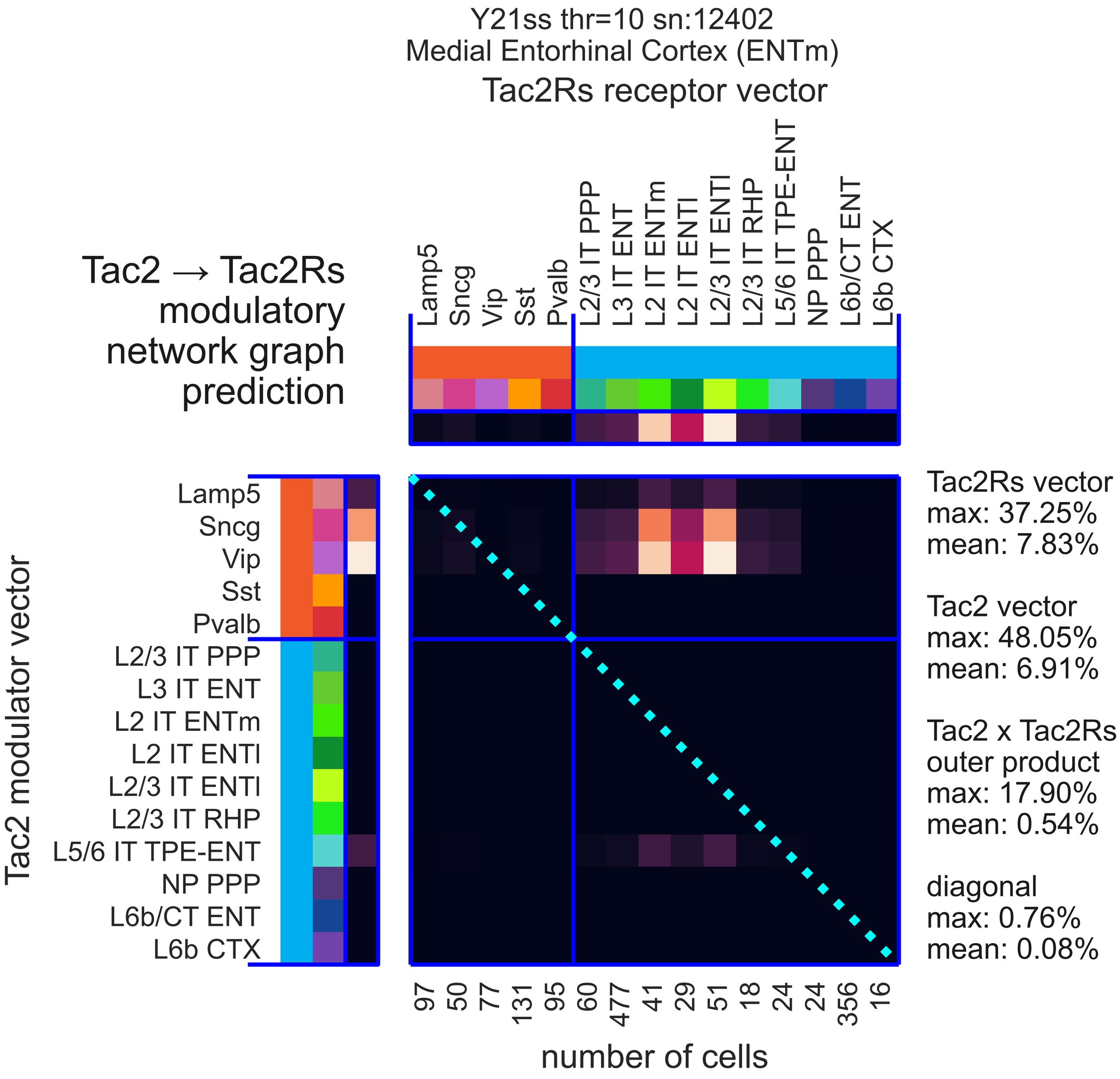
Tac2 vector
max: 67.74%
mean: 8.97%

Tac2 x Tac2Rs
outer product
max: 3.50%
mean: 0.11%

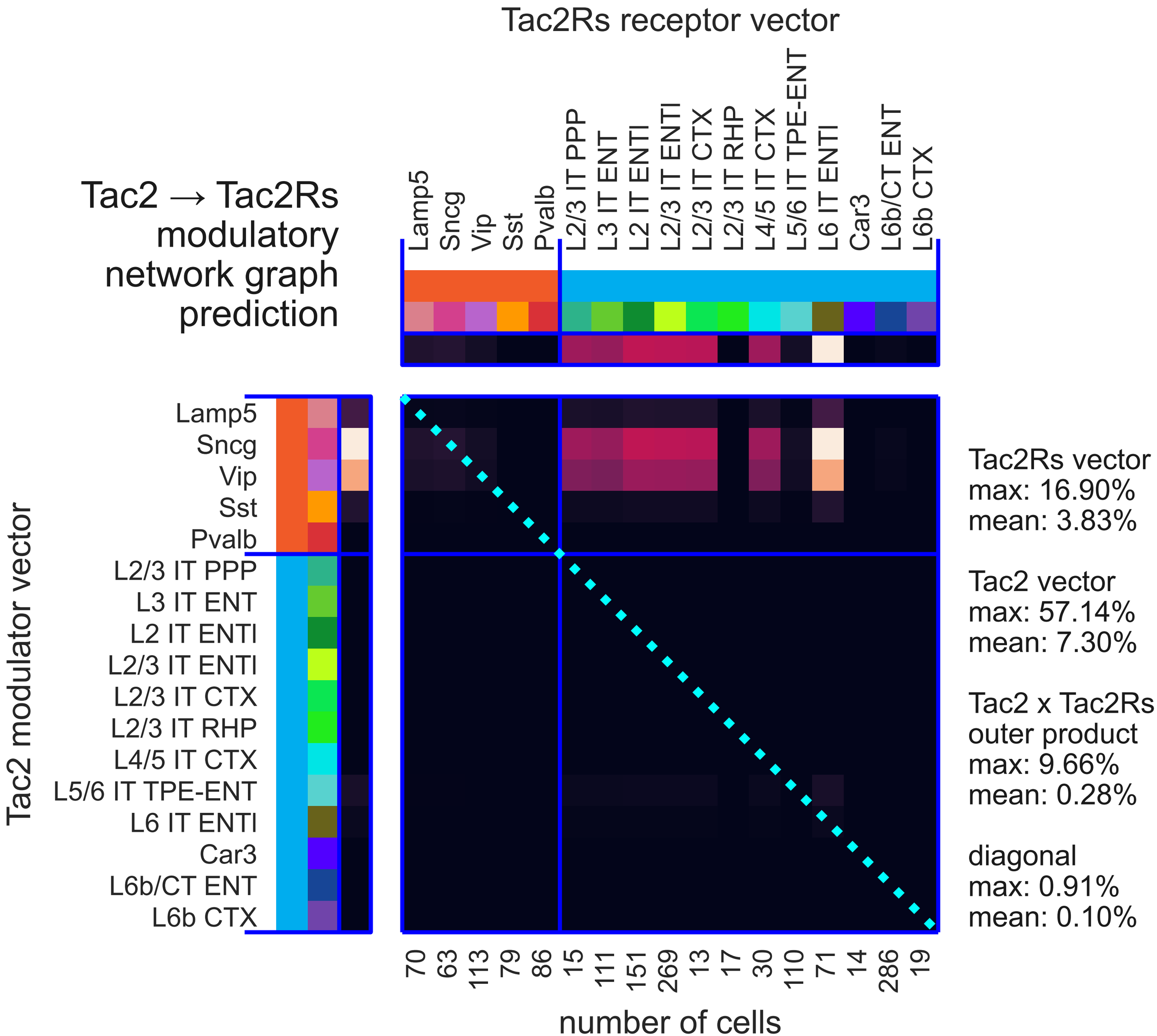
diagonal
max: 0.02%
mean: 0.00%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)



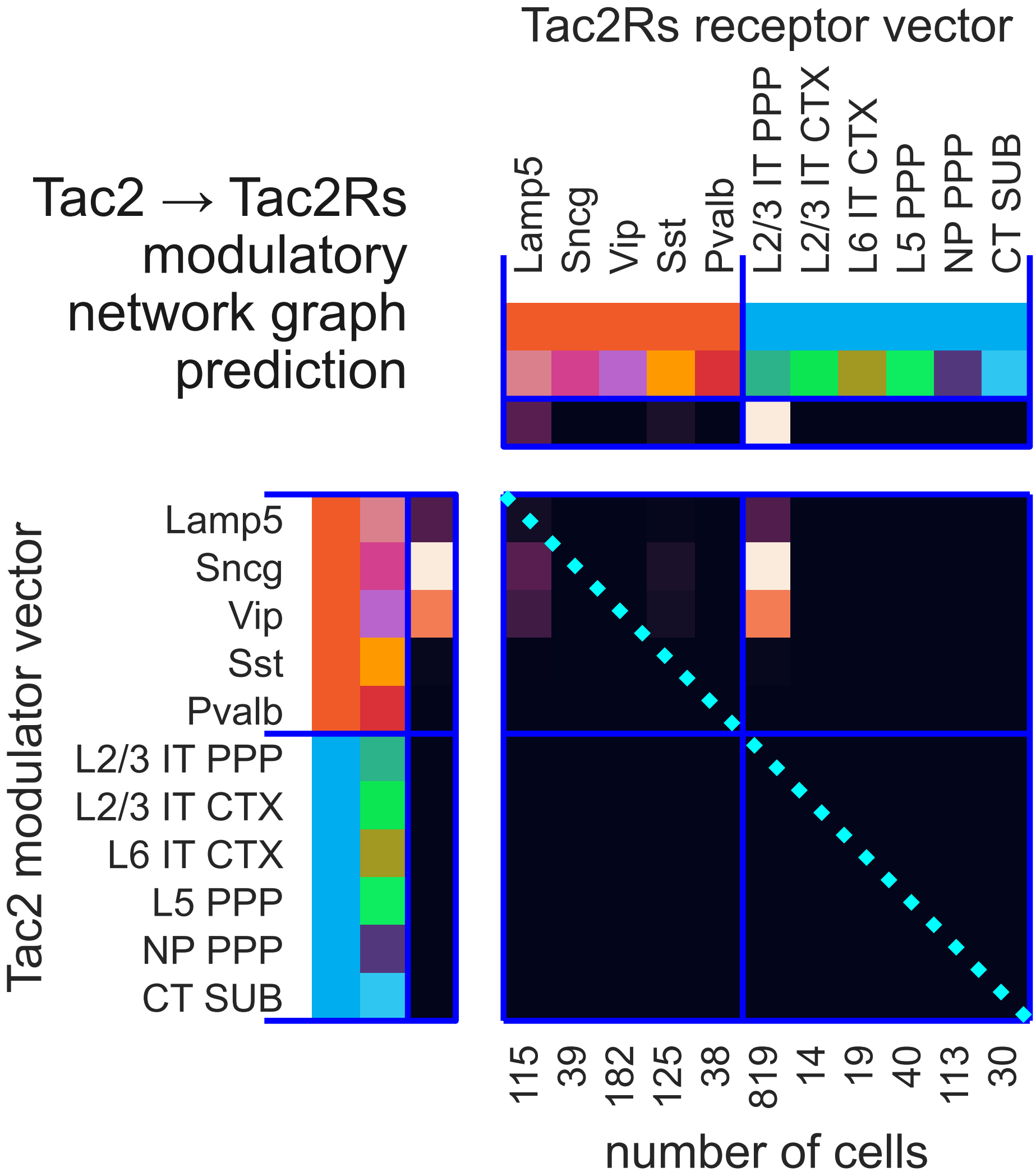

Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
Tac2Rs receptor vector
Tac2 → Tac2Rs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Tac2 modulator vector
Tac2Rs vector
max: 37.25%
mean: 7.83%
Tac2 vector
max: 48.05%
mean: 6.91%
Tac2 x Tac2Rs
outer product
max: 17.90%
mean: 0.54%
diagonal
max: 0.76%
mean: 0.08%
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)



Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

Tac2 → Tac2Rs
modulatory
network graph
prediction



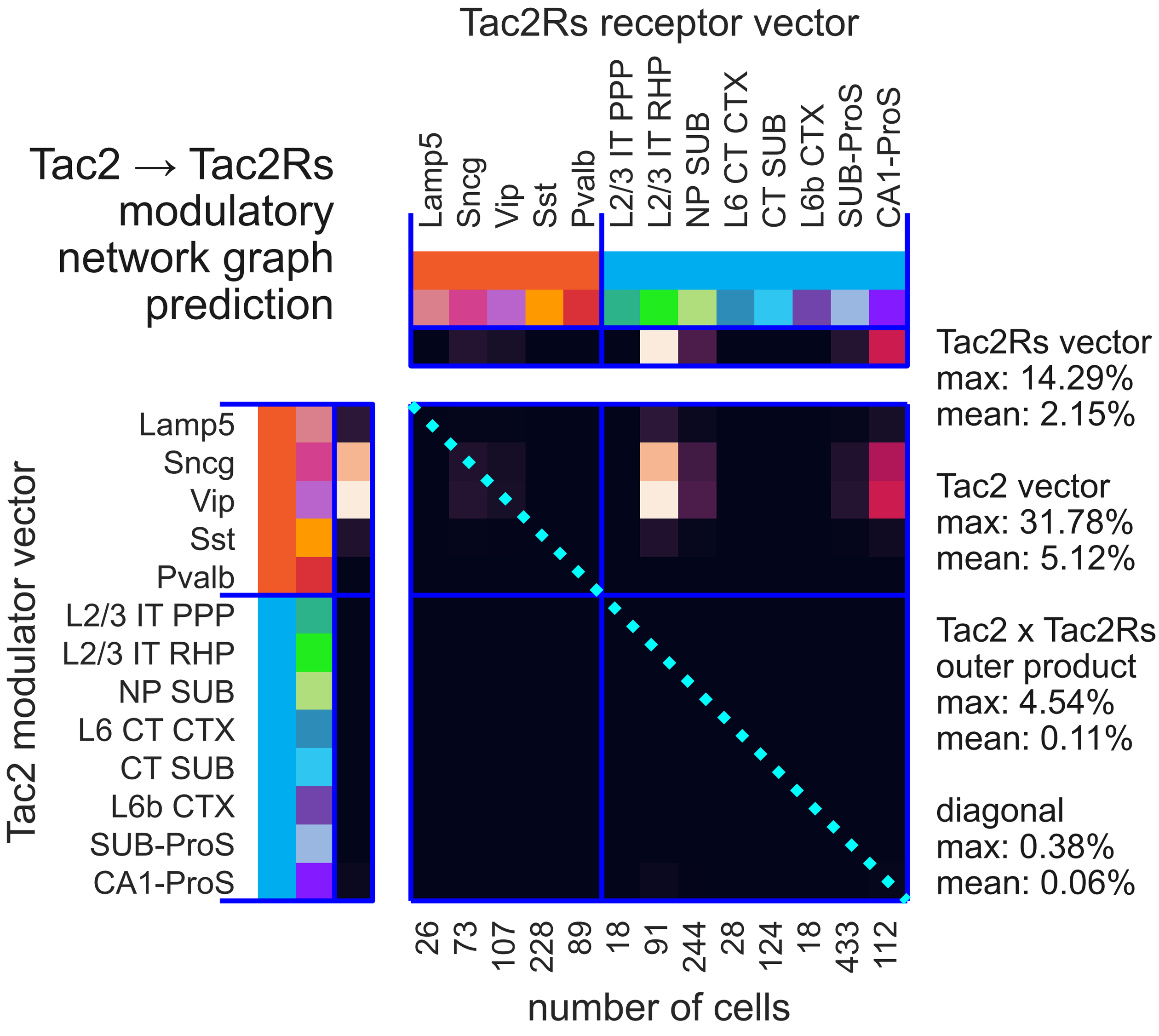
Tac2Rs vector
max: 11.23%
mean: 1.33%

Tac2 vector
max: 46.15%
mean: 8.19%

Tac2 x Tac2Rs
outer product
max: 5.18%
mean: 0.11%

diagonal
max: 0.25%
mean: 0.02%

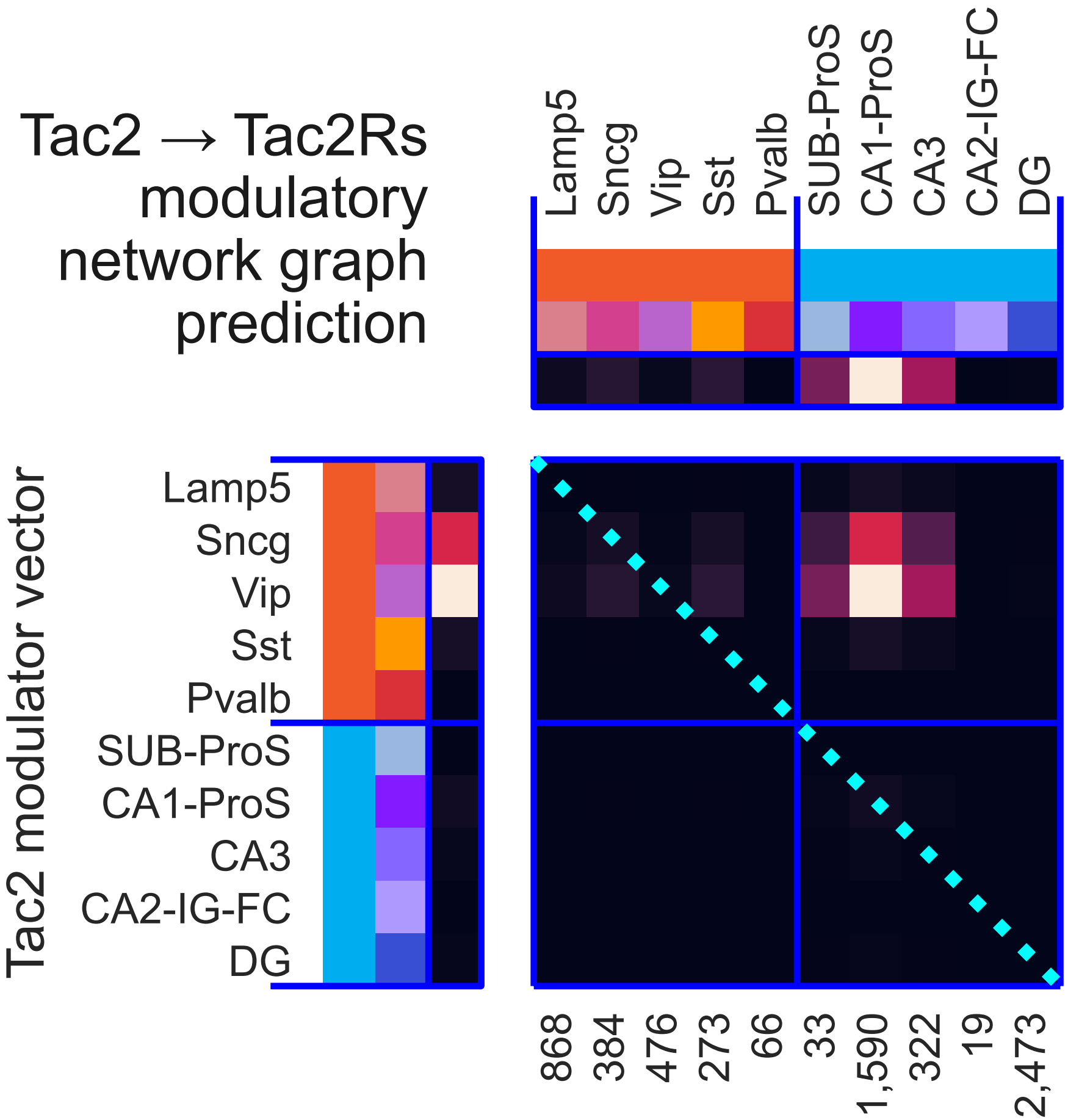
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



Y21ss thr=10 sn:12402
Hippocampus (HIP)

Tac2Rs receptor vector

Tac2 → Tac2Rs
modulatory
network graph
prediction

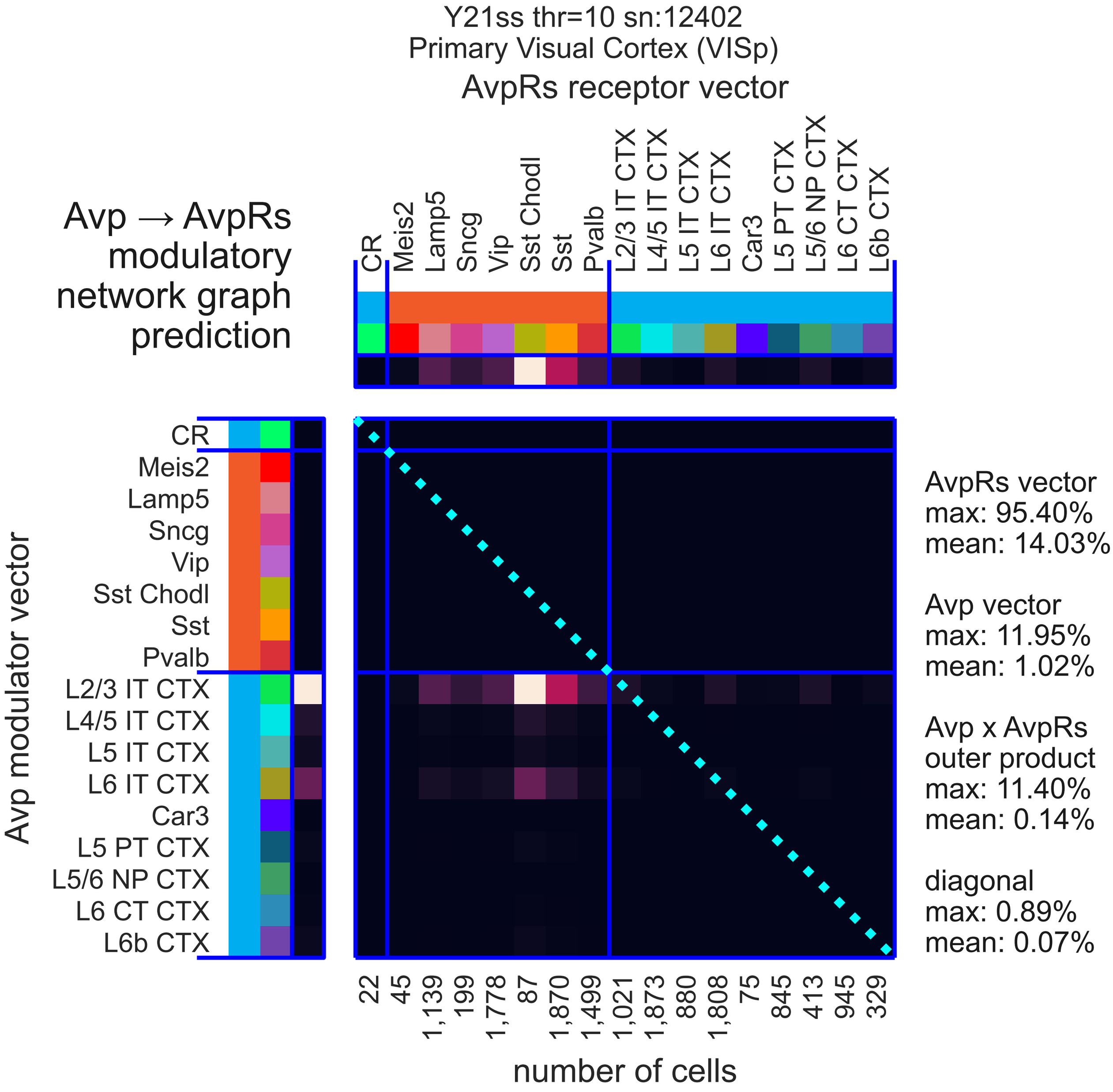


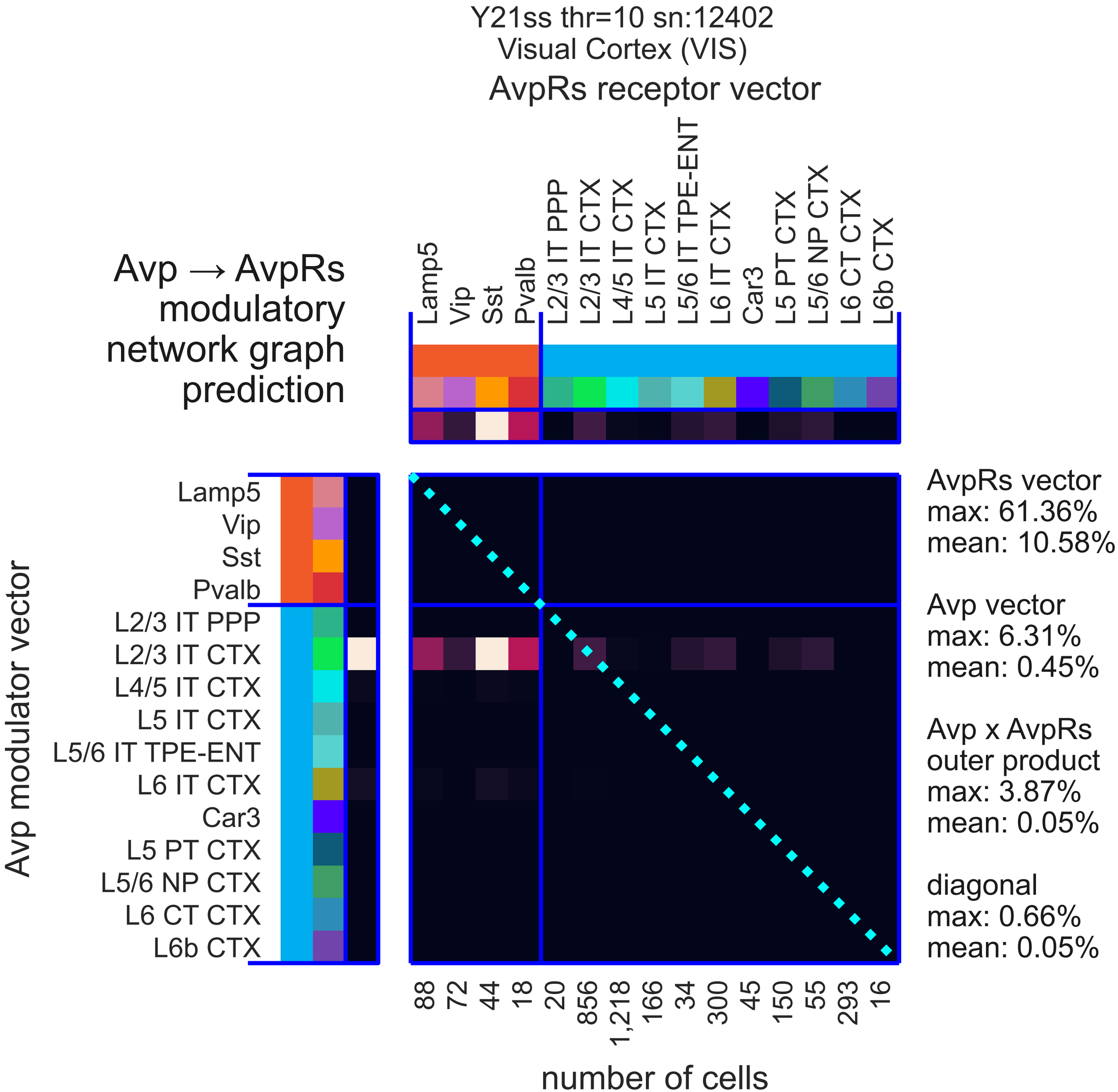
Tac2Rs vector
max: 10.00%
mean: 1.98%

Tac2 vector
max: 35.50%
mean: 6.15%

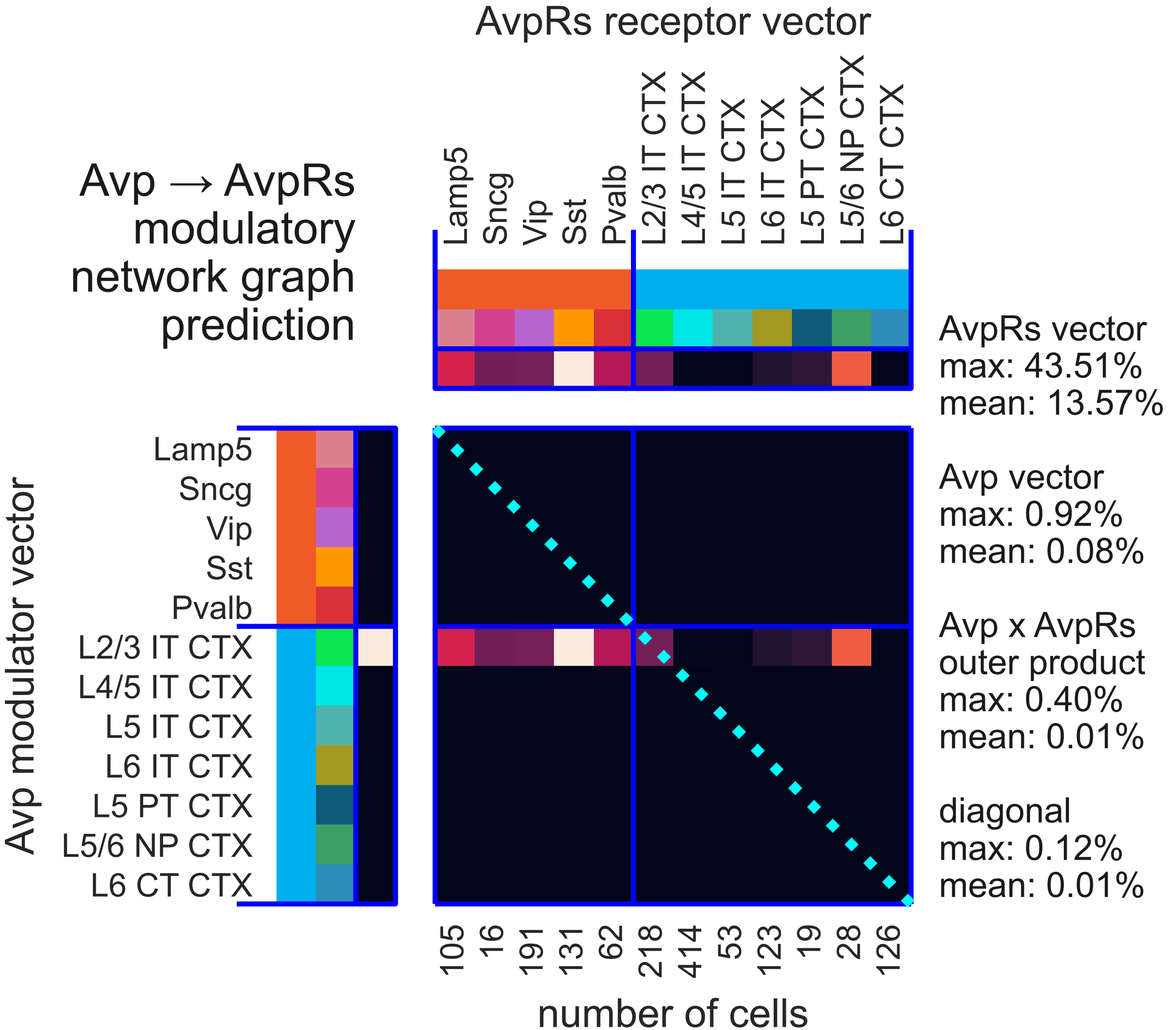
Tac2 x Tac2Rs
outer product
max: 3.55%
mean: 0.12%

diagonal
max: 0.20%
mean: 0.05%

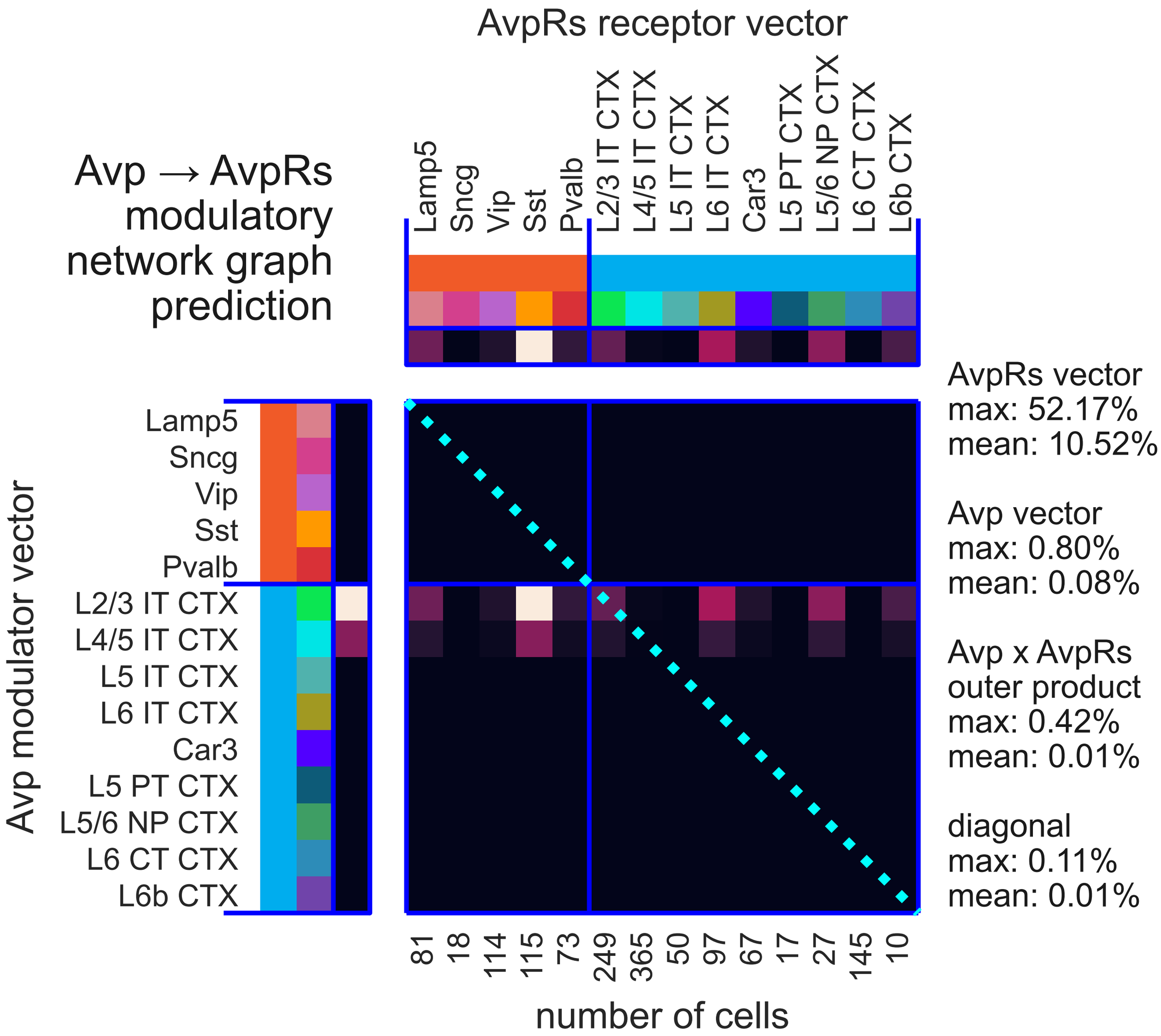

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
AvpRs receptor vector
Avp → AvpRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Avp modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
AvpRs vector
max: 95.40%
mean: 14.03%
Avp vector
max: 11.95%
mean: 1.02%
Avp x AvpRs
outer product
max: 11.40%
mean: 0.14%
diagonal
max: 0.89%
mean: 0.07%


Y21ss thr=10 sn:12402
Visual Cortex (VIS)
AvpRs receptor vector
Avp → AvpRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Avp modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
AvpRs vector
max: 61.36%
mean: 10.58%
Avp vector
max: 6.31%
mean: 0.45%
Avp x AvpRs
outer product
max: 3.87%
mean: 0.05%
diagonal
max: 0.66%
mean: 0.05%

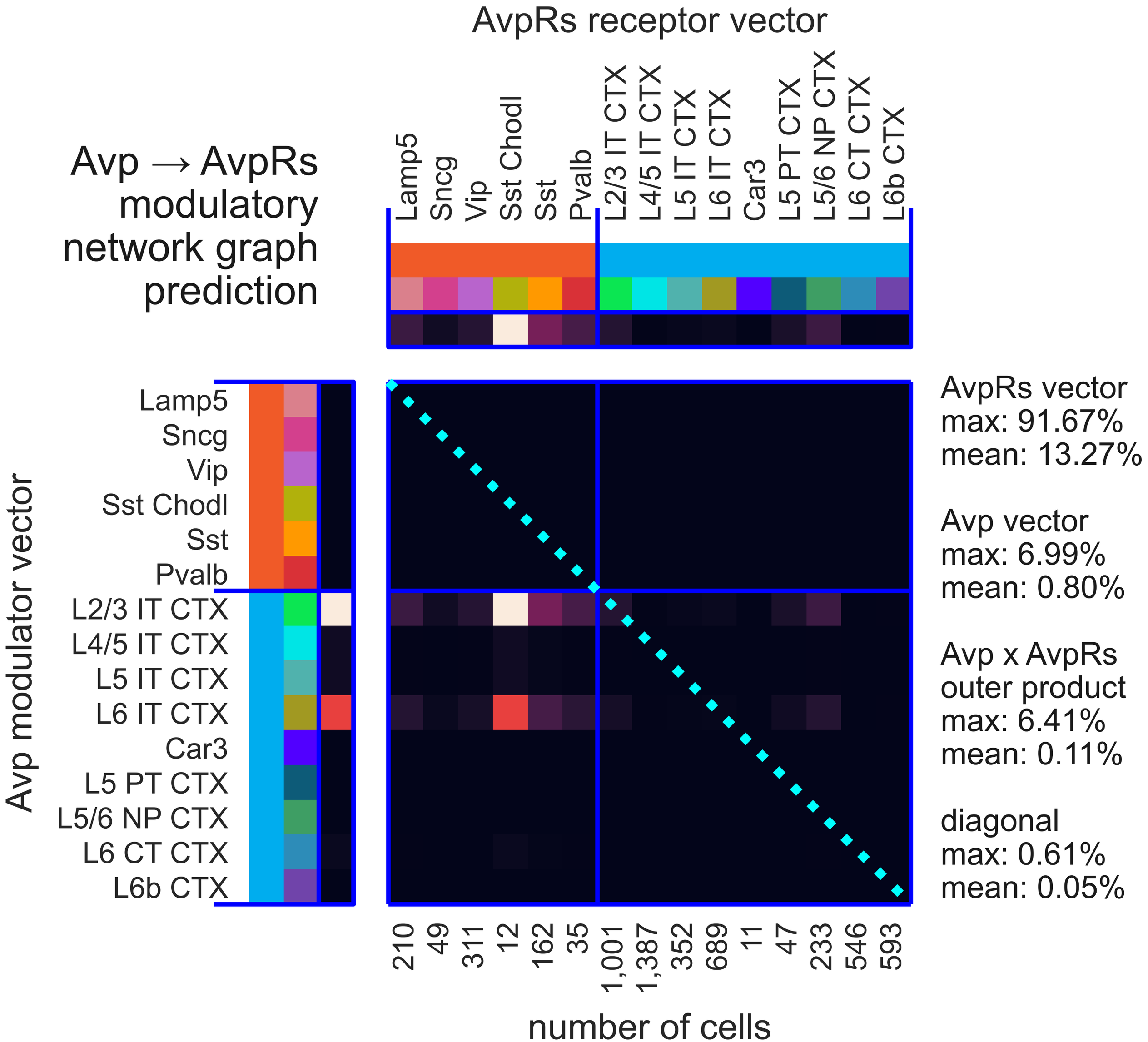
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



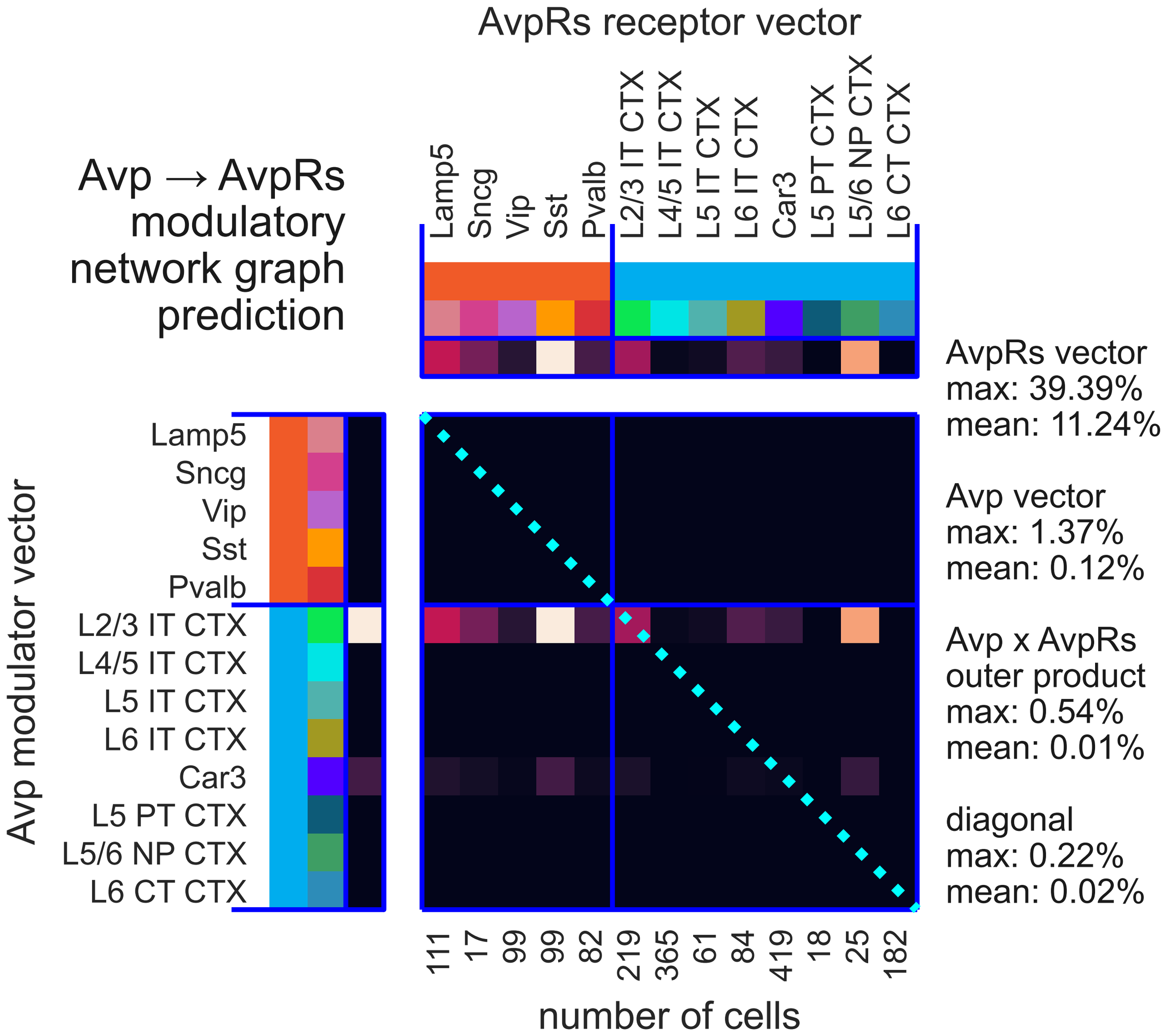
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)



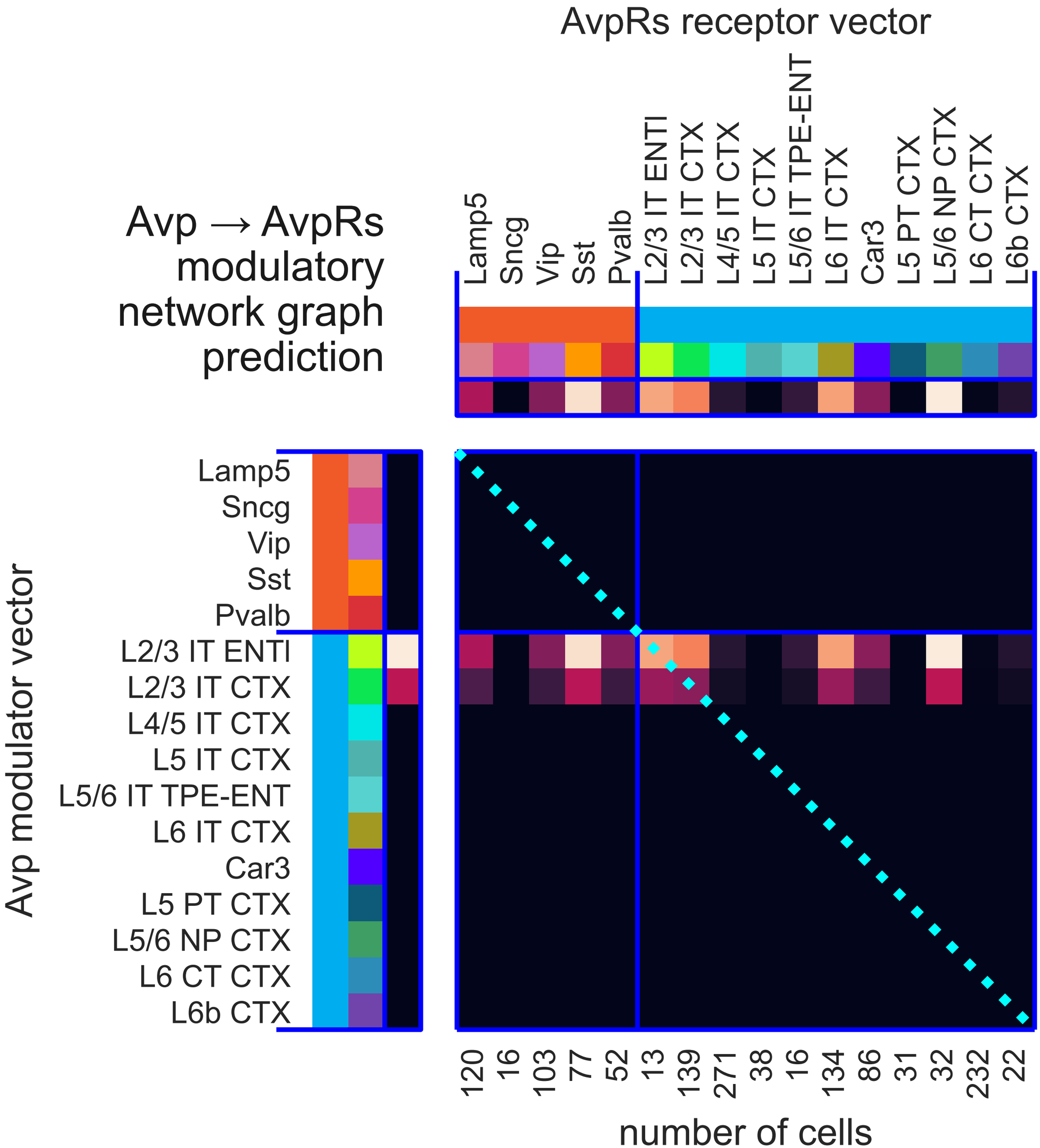
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



Y21ss thr=10 sn:12402
Gustatory Cortex (GU)



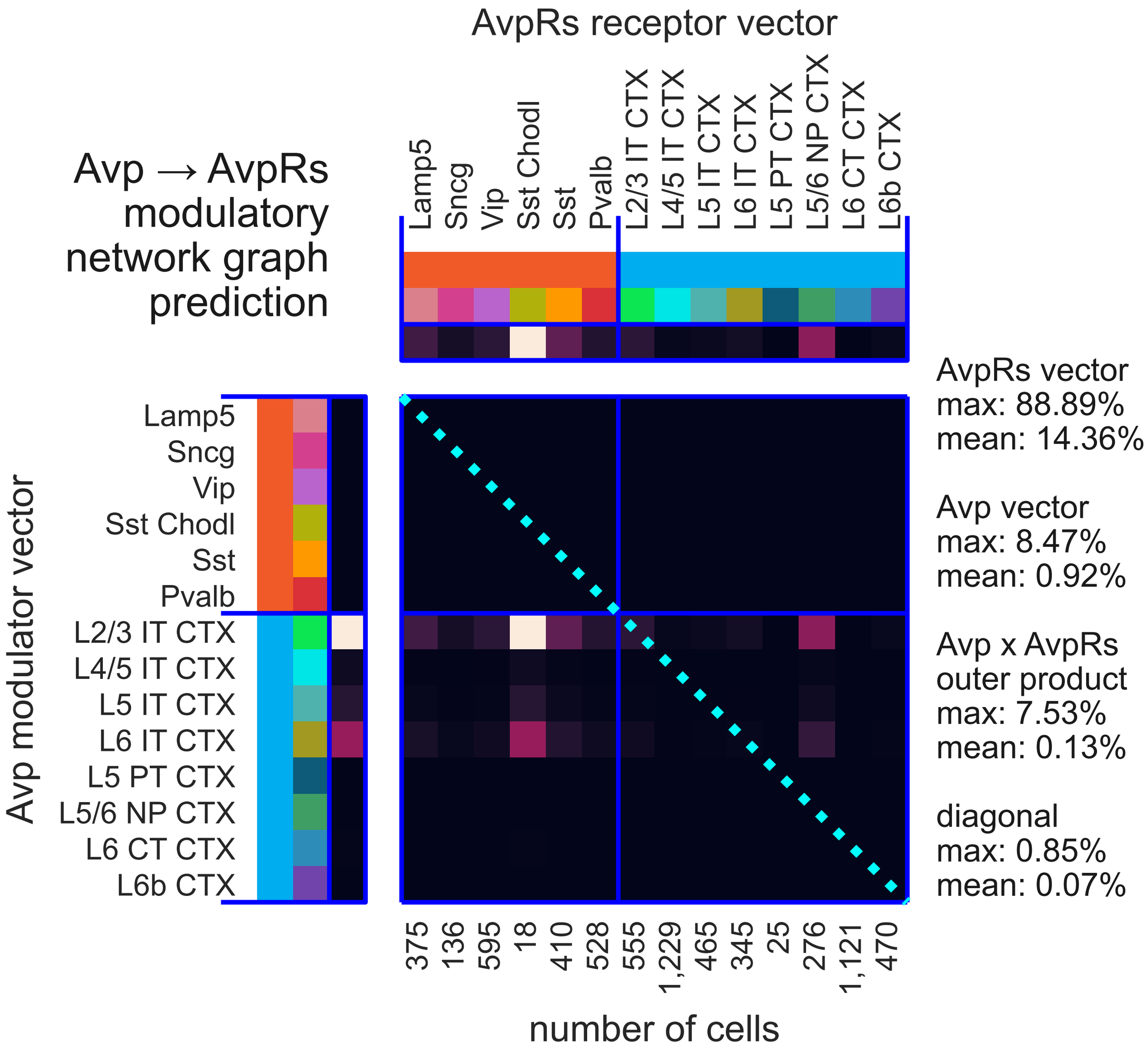
AvpRs vector
max: 46.88%
mean: 17.91%

Avp vector
max: 7.69%
mean: 0.71%

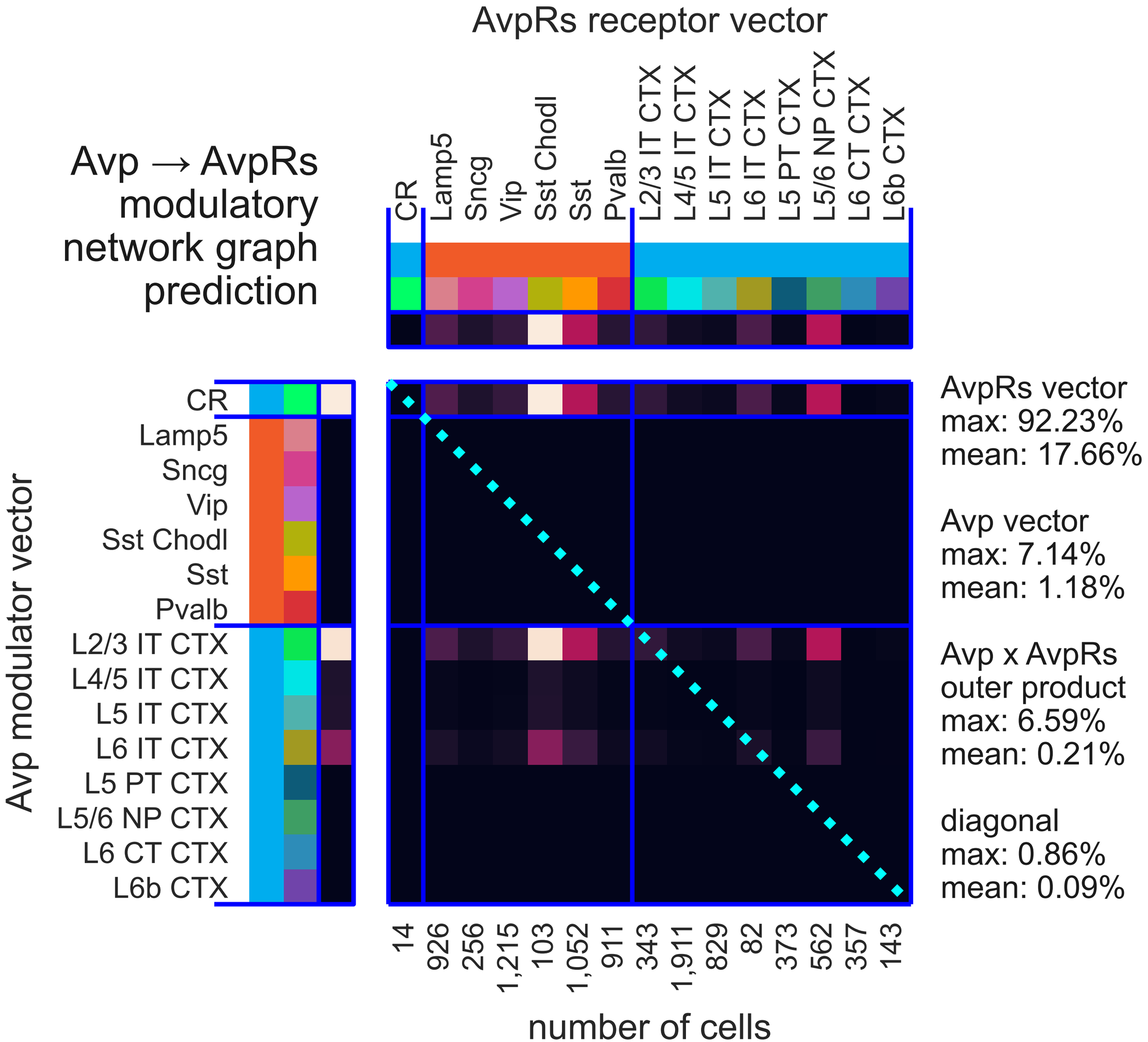
Avp x AvpRs
outer product
max: 3.61%
mean: 0.13%

diagonal
max: 2.96%
mean: 0.26%

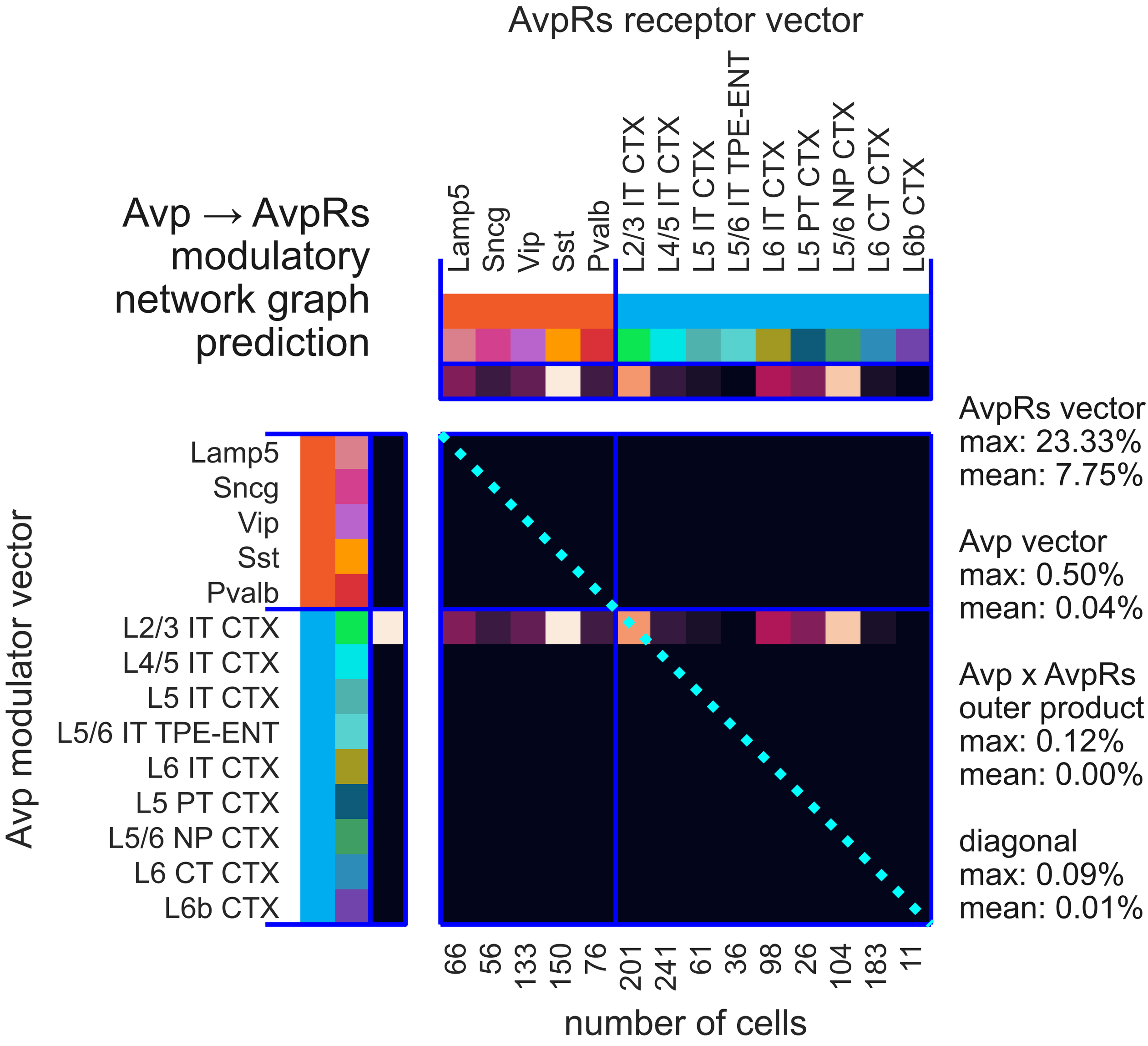
Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)

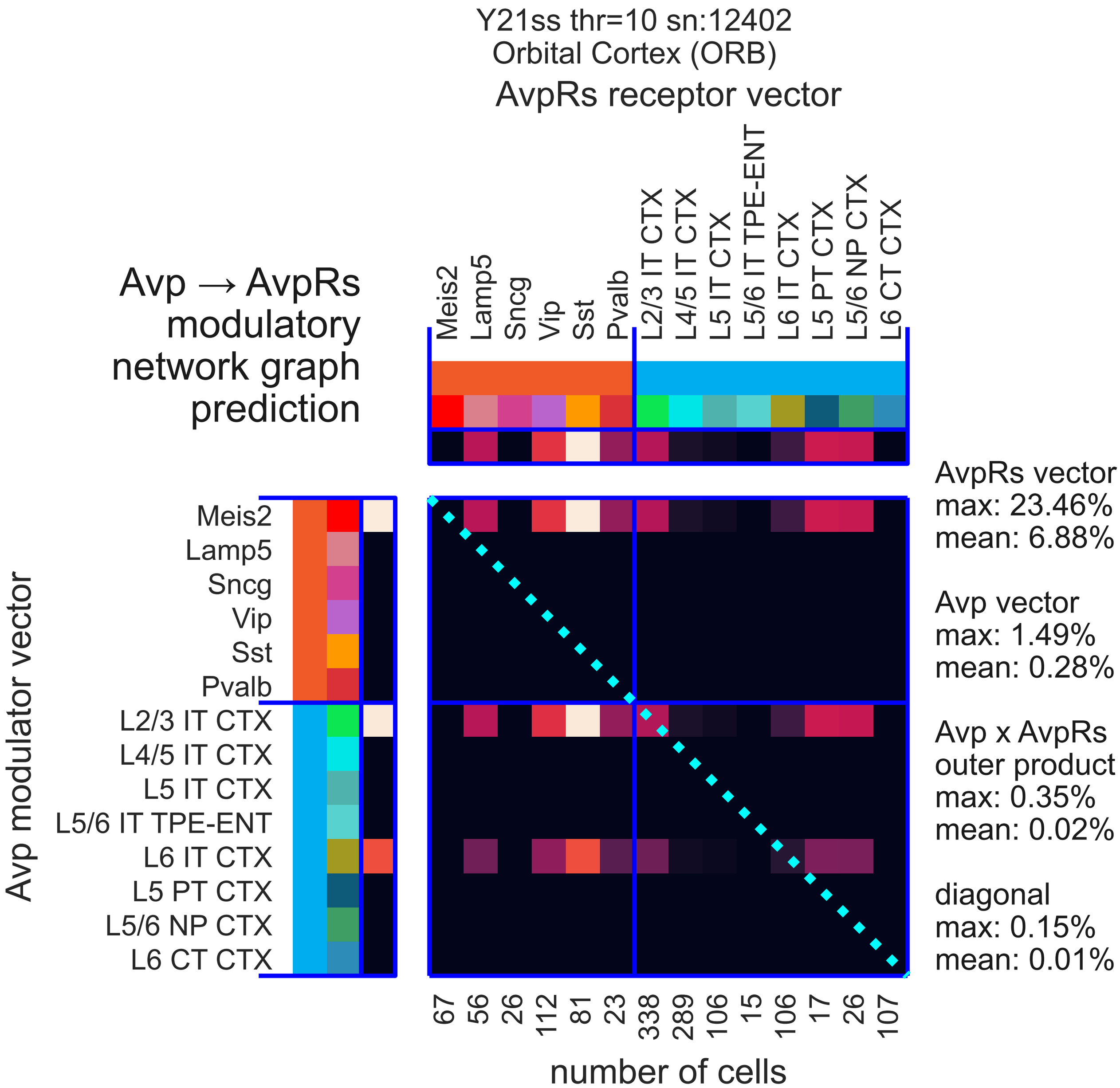


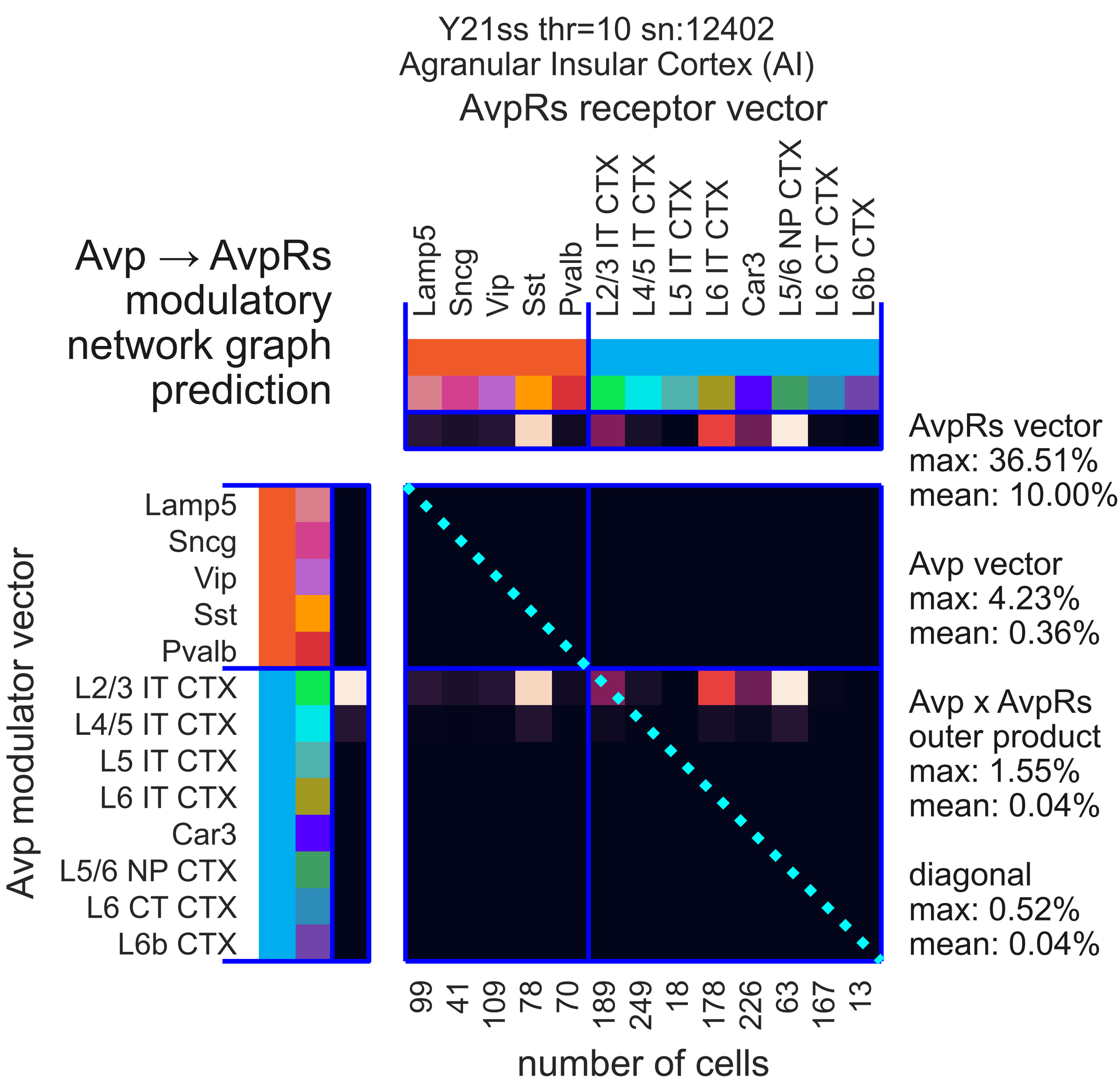
Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)



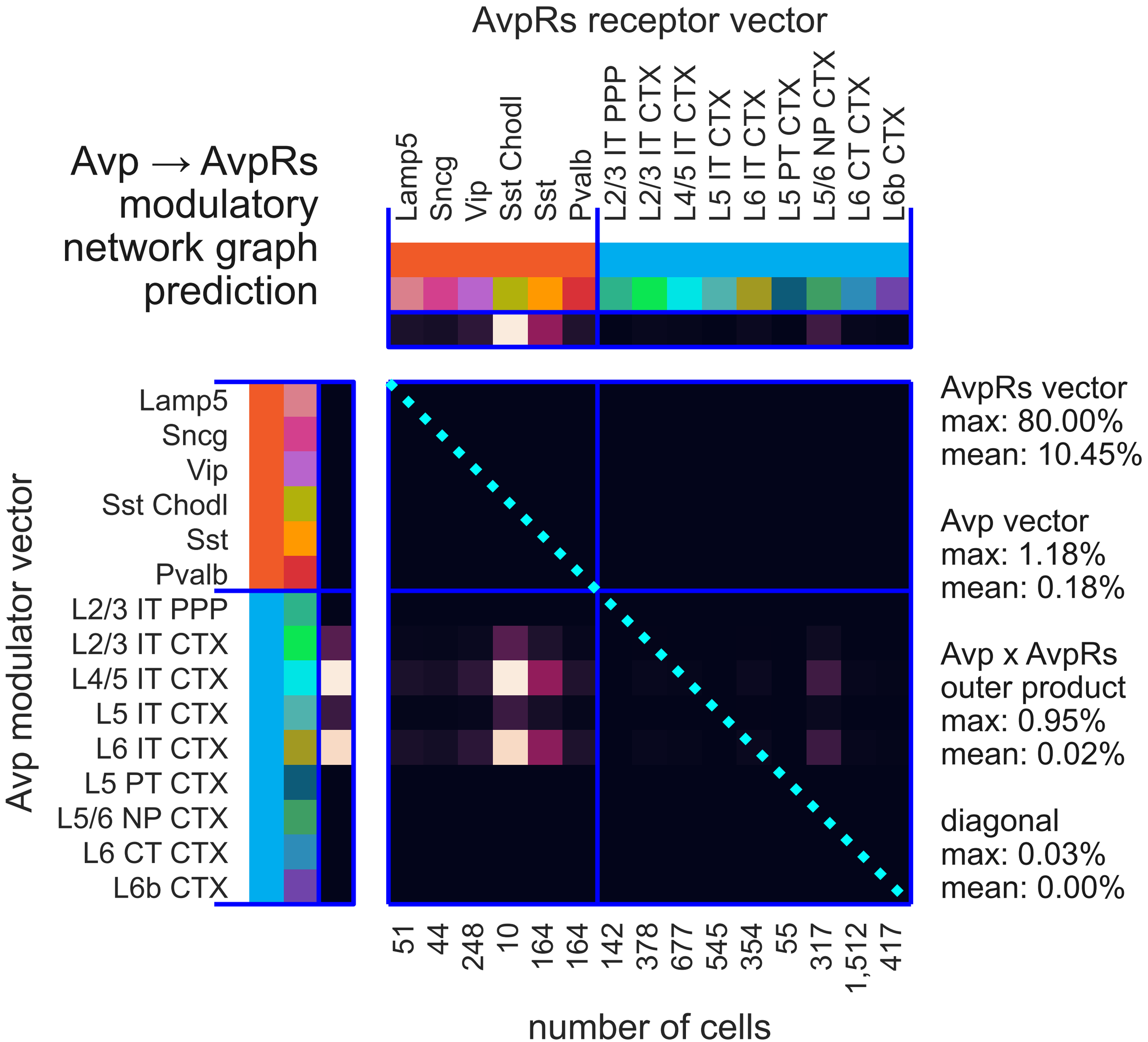
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

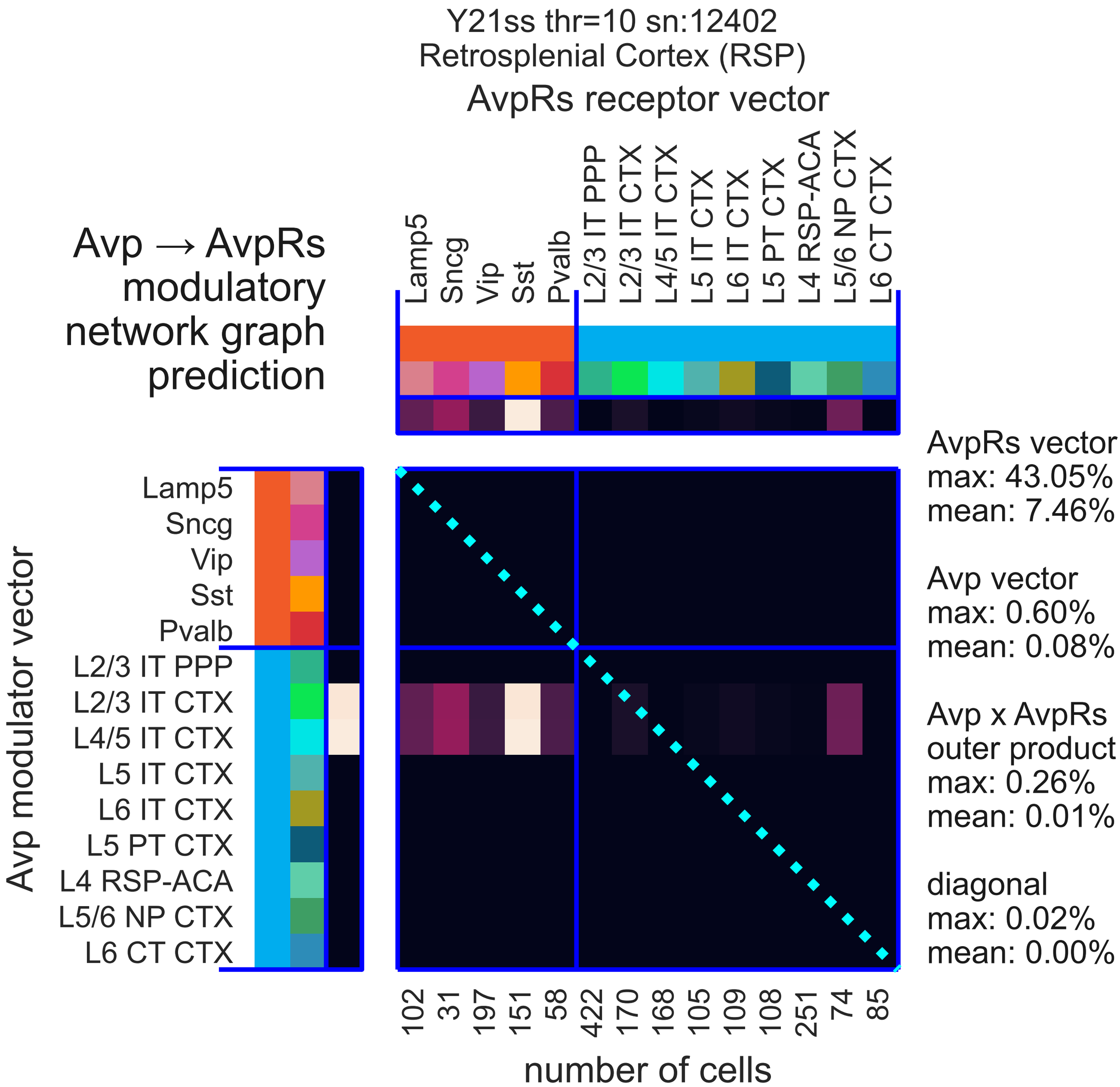



Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
AvpRs receptor vector
Avp → AvpRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Avp modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
AvpRs vector
max: 23.46%
mean: 6.88%
Avp vector
max: 1.49%
mean: 0.28%
Avp x AvpRs
outer product
max: 0.35%
mean: 0.02%
diagonal
max: 0.15%
mean: 0.01%

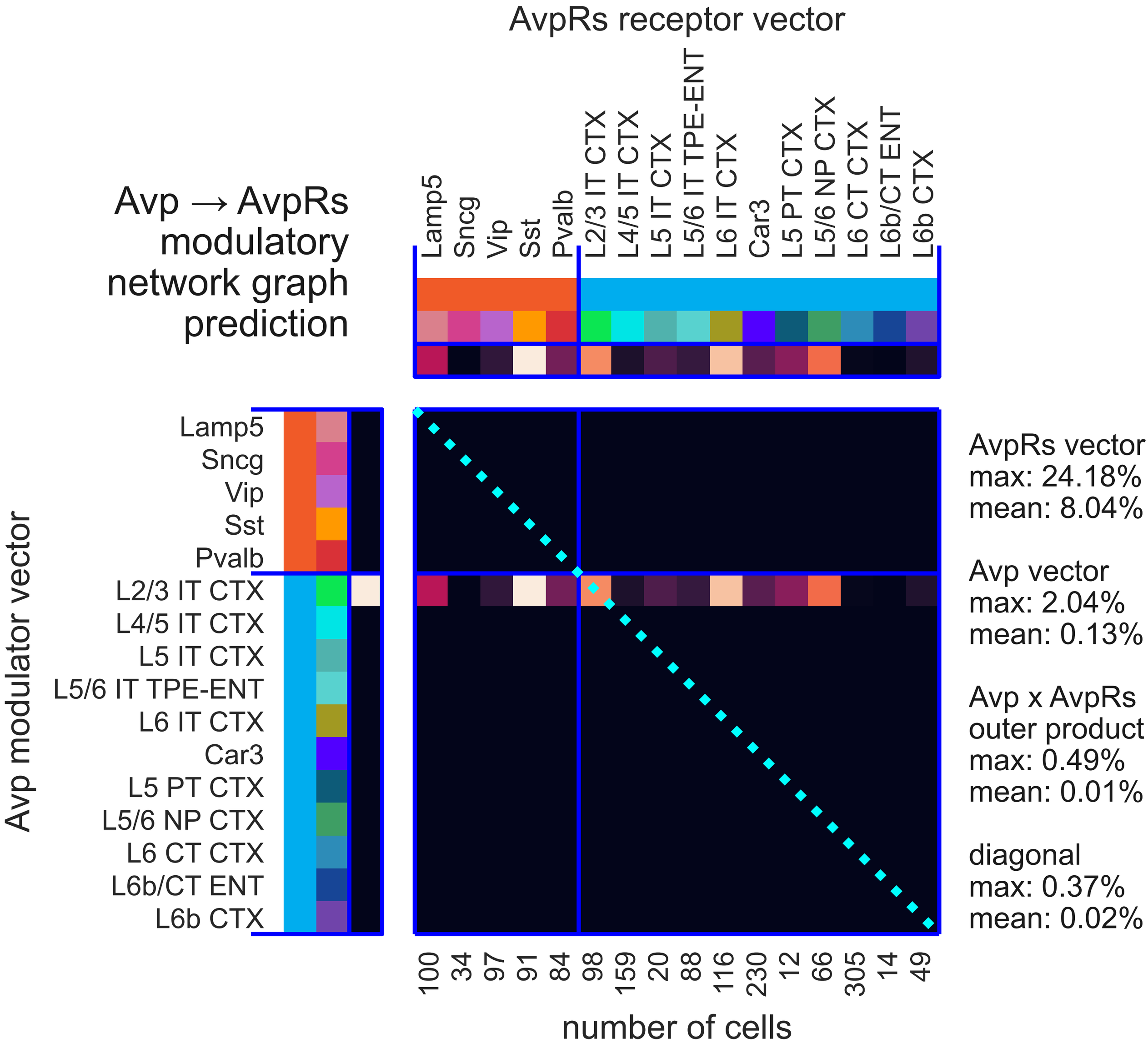

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)
AvpRs receptor vector
Avp → AvpRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5/6 NP CTX
L6 CT CTX
L6b CTX
AvpRs vector
max: 36.51%
mean: 10.00%
Avp vector
max: 4.23%
mean: 0.36%
Avp x AvpRs
outer product
max: 1.55%
mean: 0.04%
diagonal
max: 0.52%
mean: 0.04%
Avp modulator vector
99
41
109
78
70
189
249
18
178
226
63
167
13
number of cells

Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

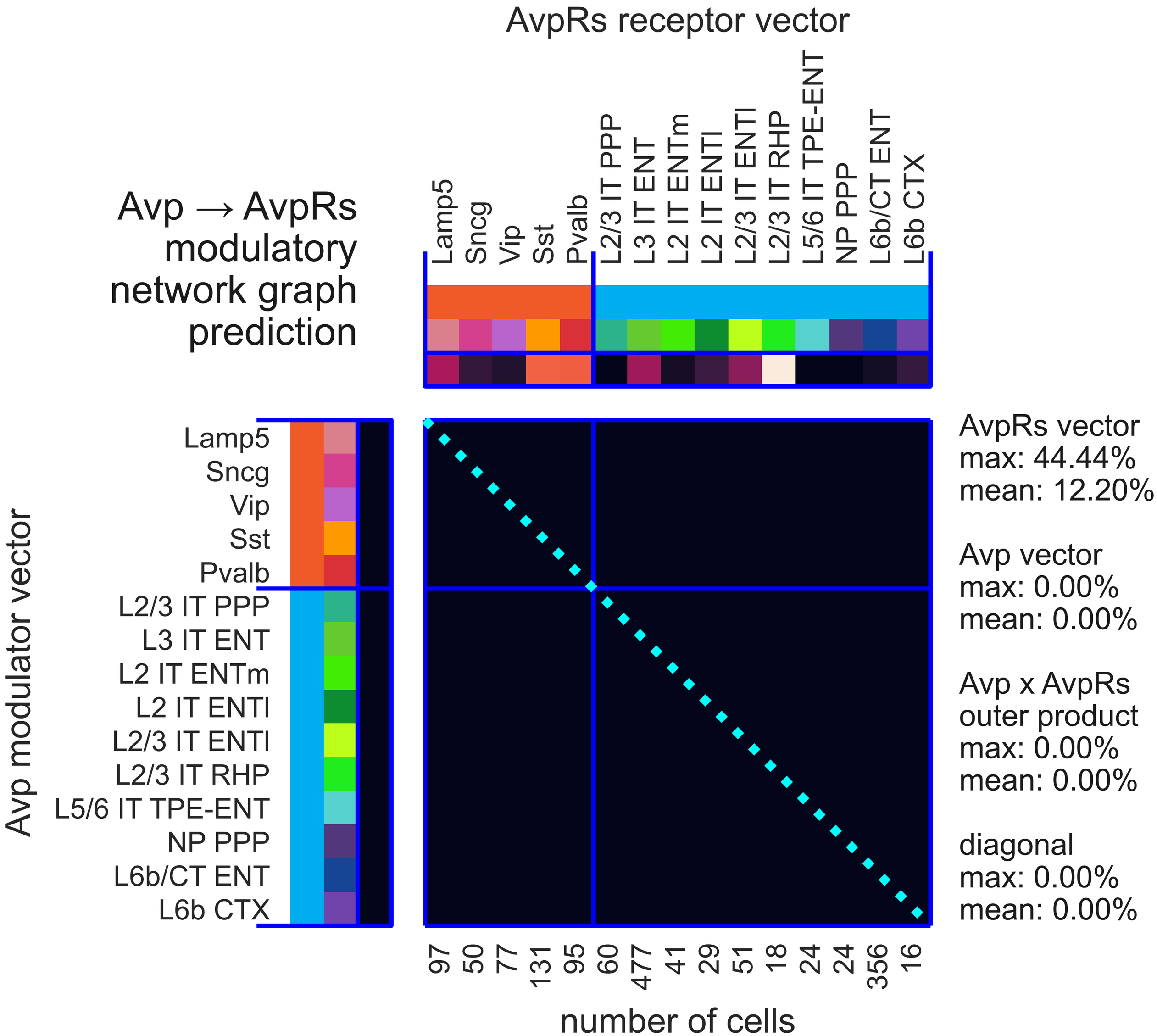


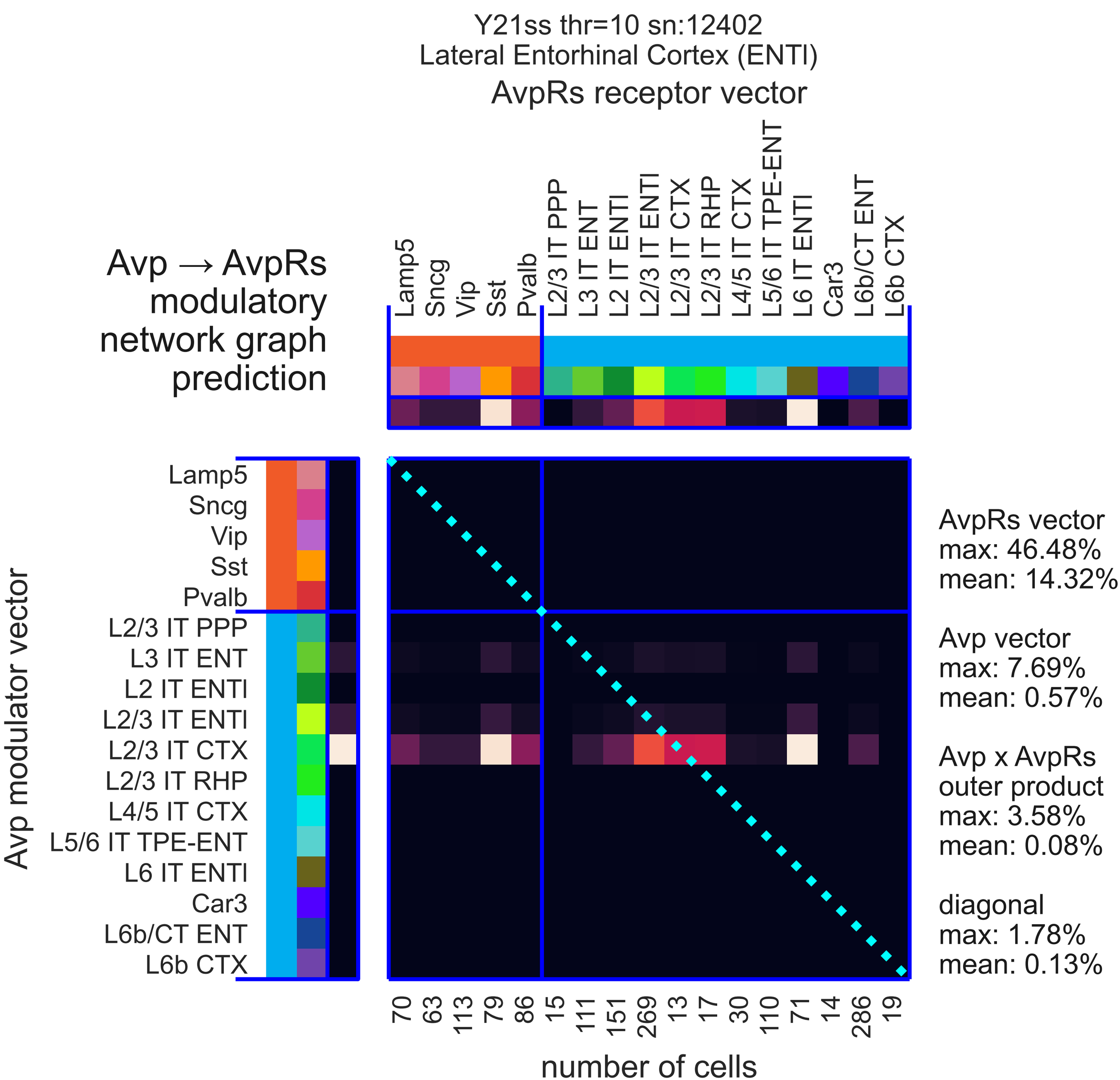

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
AvpRs receptor vector
Avp → AvpRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Avp modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
AvpRs vector
max: 43.05%
mean: 7.46%
Avp vector
max: 0.60%
mean: 0.08%
Avp x AvpRs
outer product
max: 0.26%
mean: 0.01%
diagonal
max: 0.02%
mean: 0.00%

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)

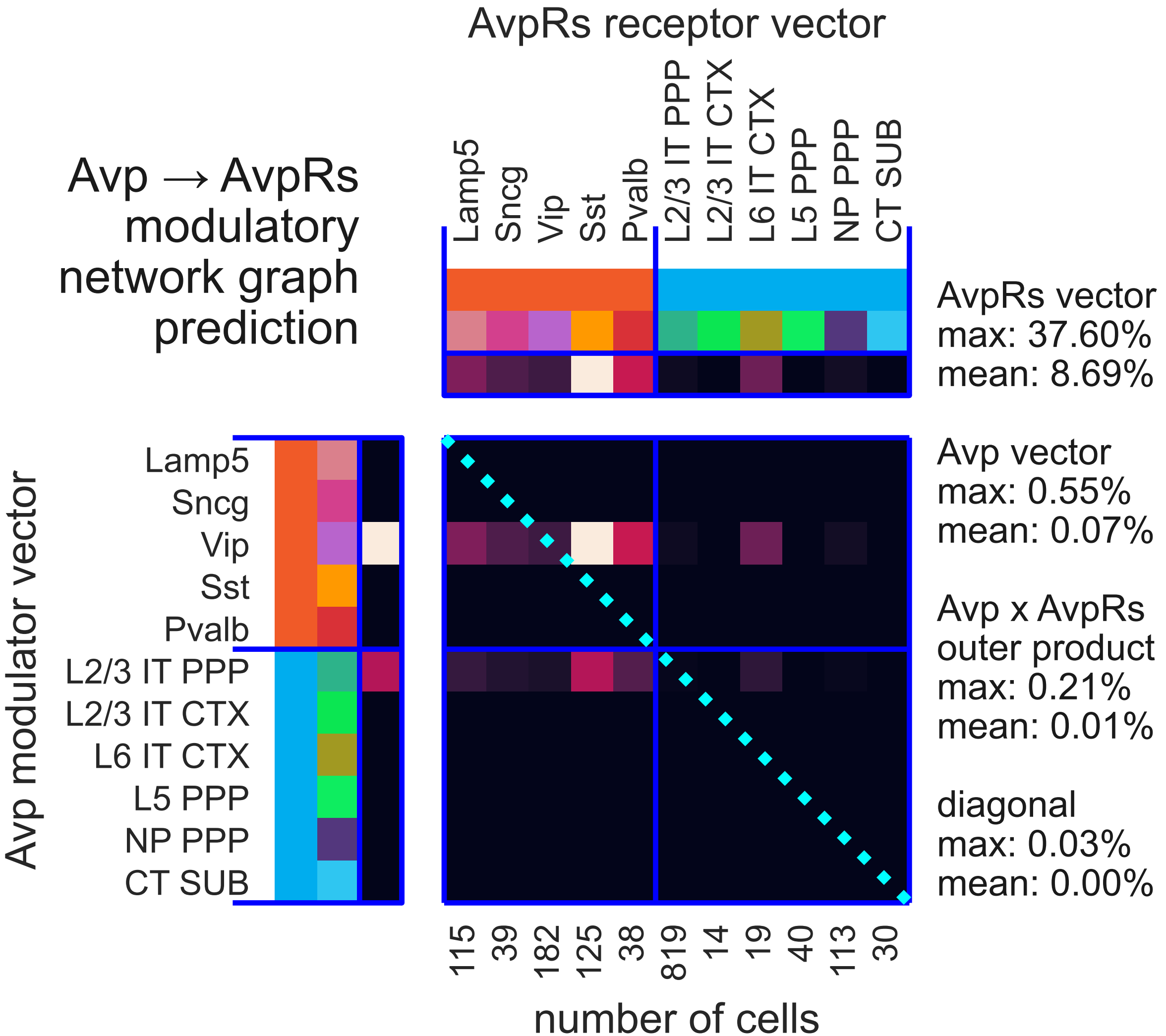


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)

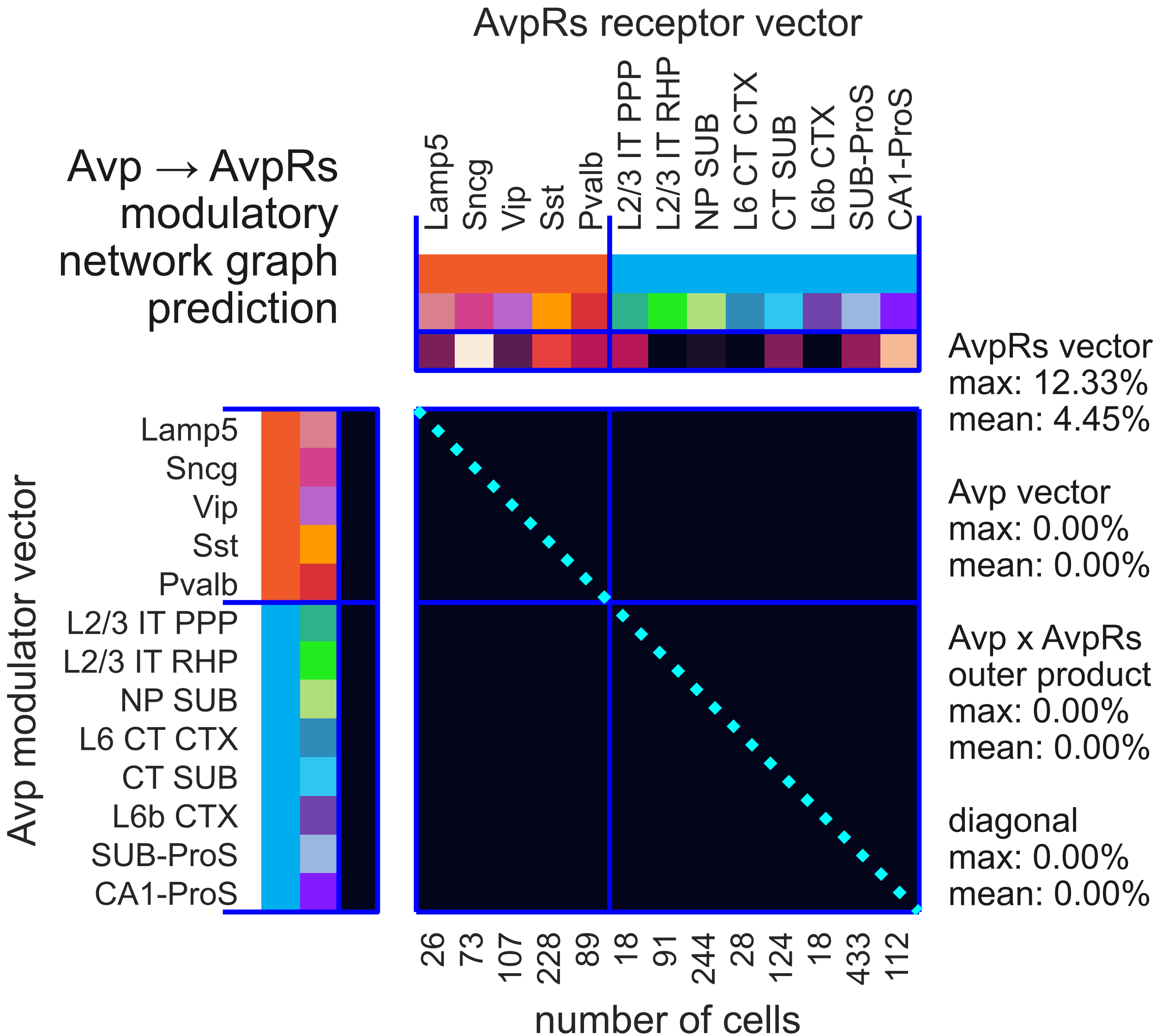



Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
AvpRs receptor vector
Avp → AvpRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Avp modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
AvpRs vector
max: 46.48%
mean: 14.32%
Avp vector
max: 7.69%
mean: 0.57%
Avp x AvpRs
outer product
max: 3.58%
mean: 0.08%
diagonal
max: 1.78%
mean: 0.13%

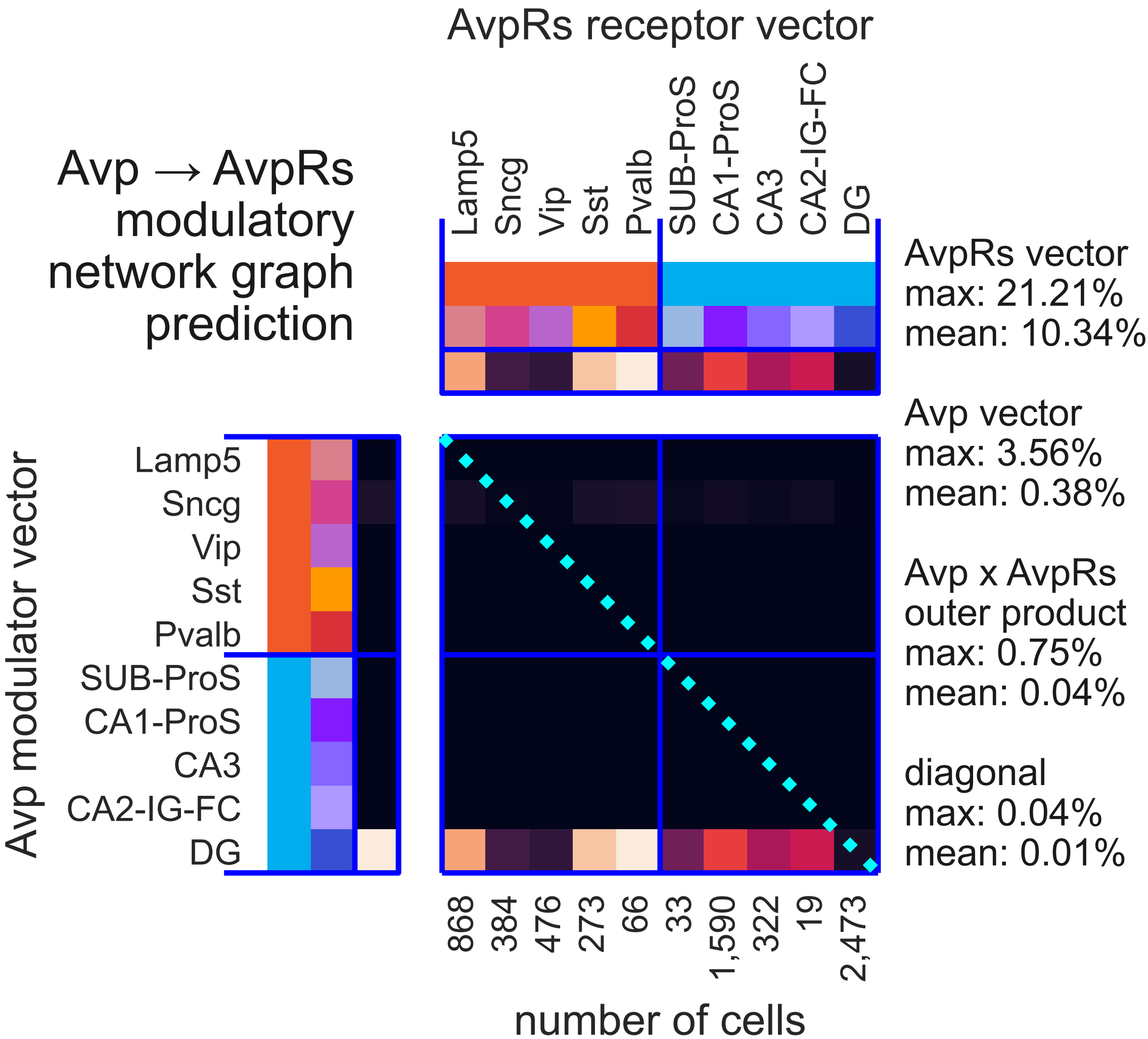
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

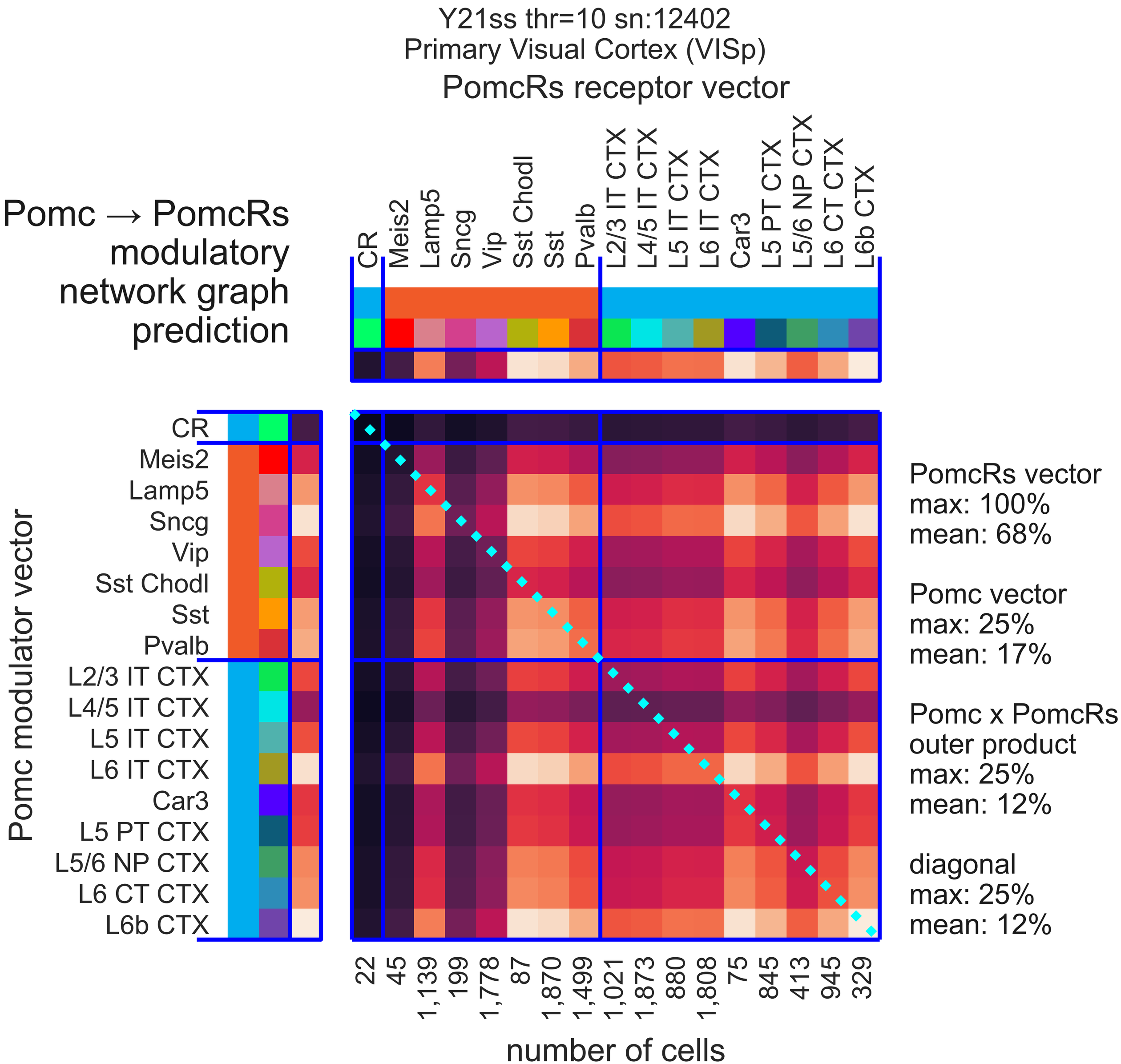


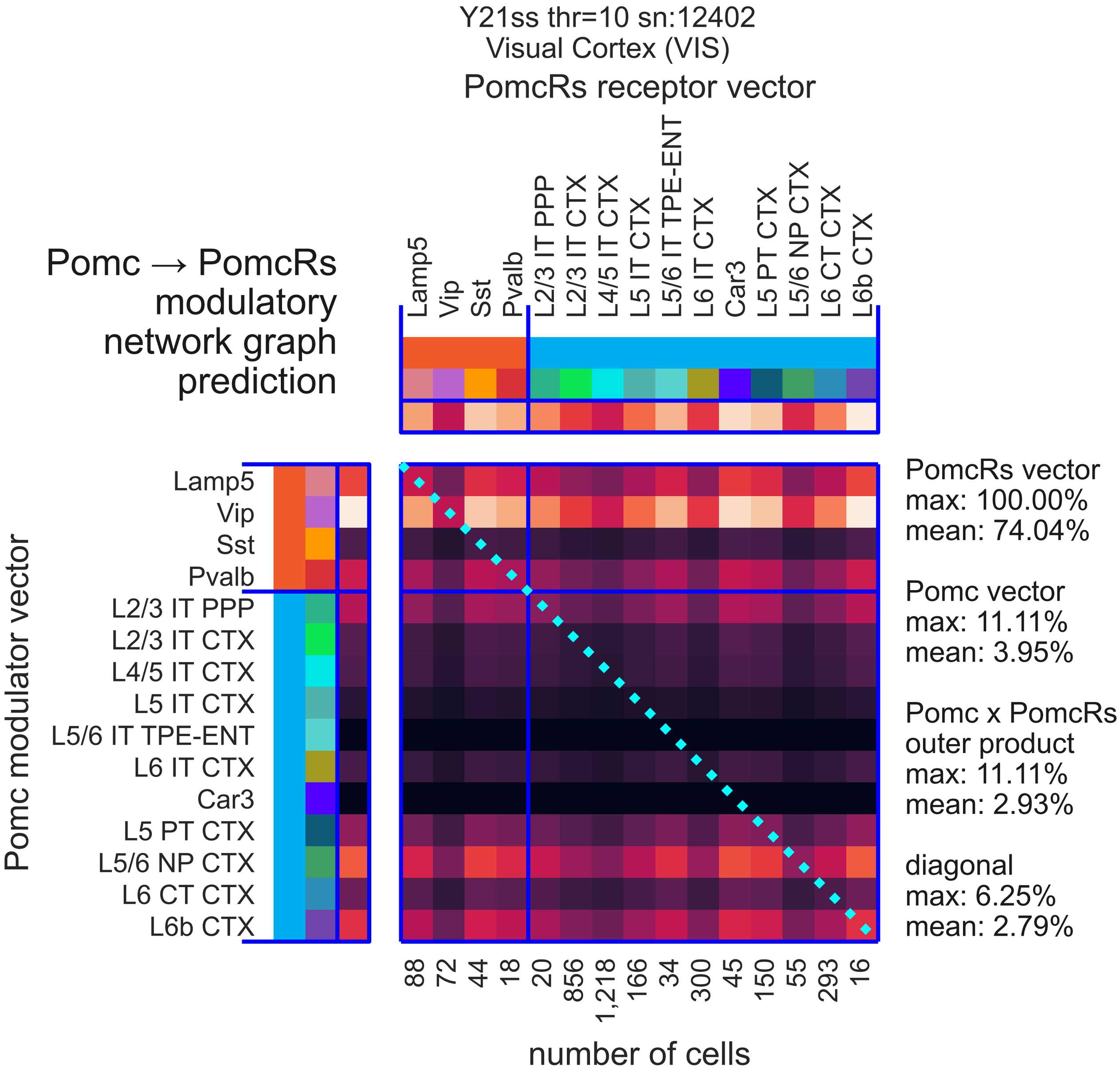
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



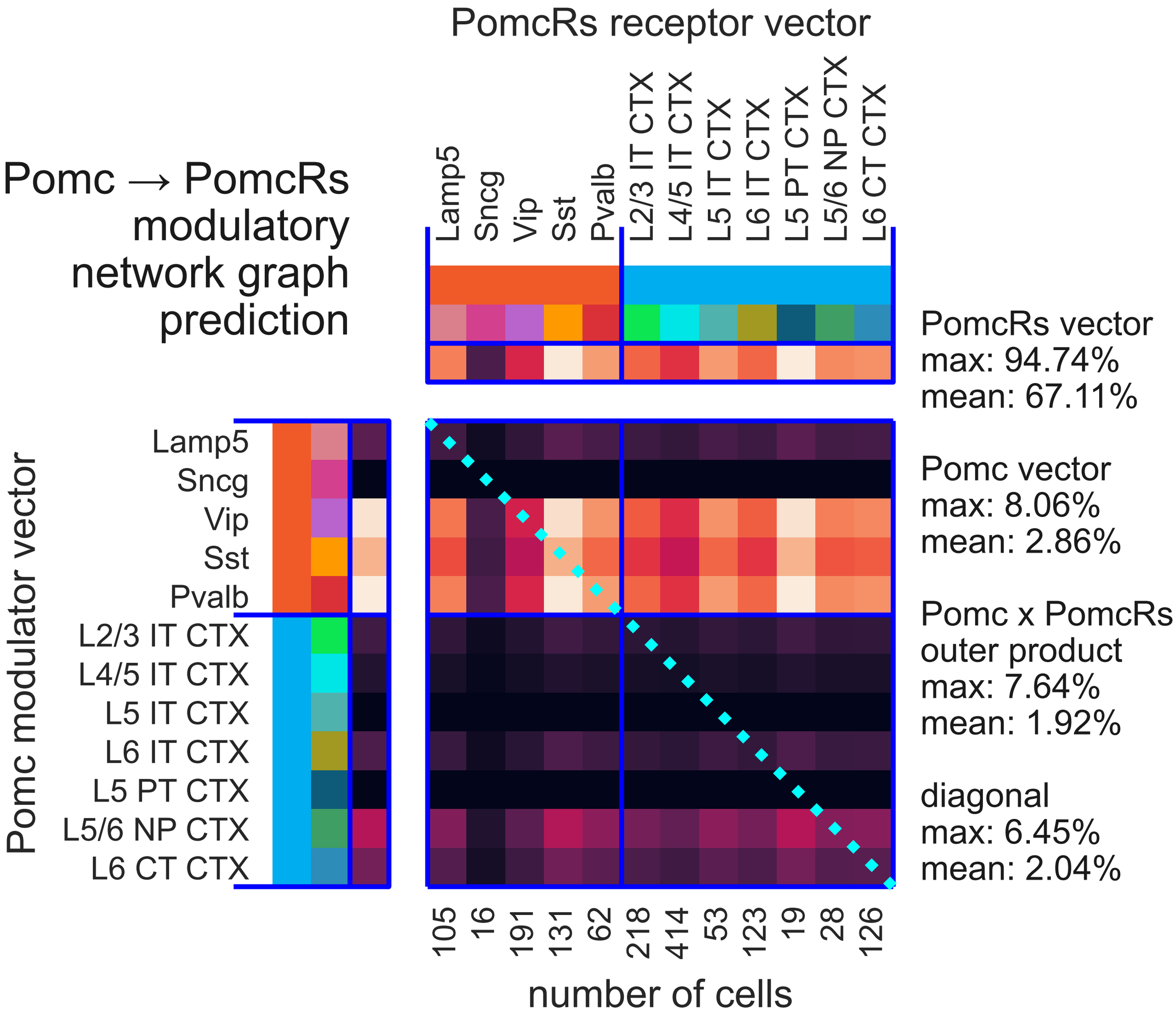
Y21ss thr=10 sn:12402
Hippocampus (HIP)



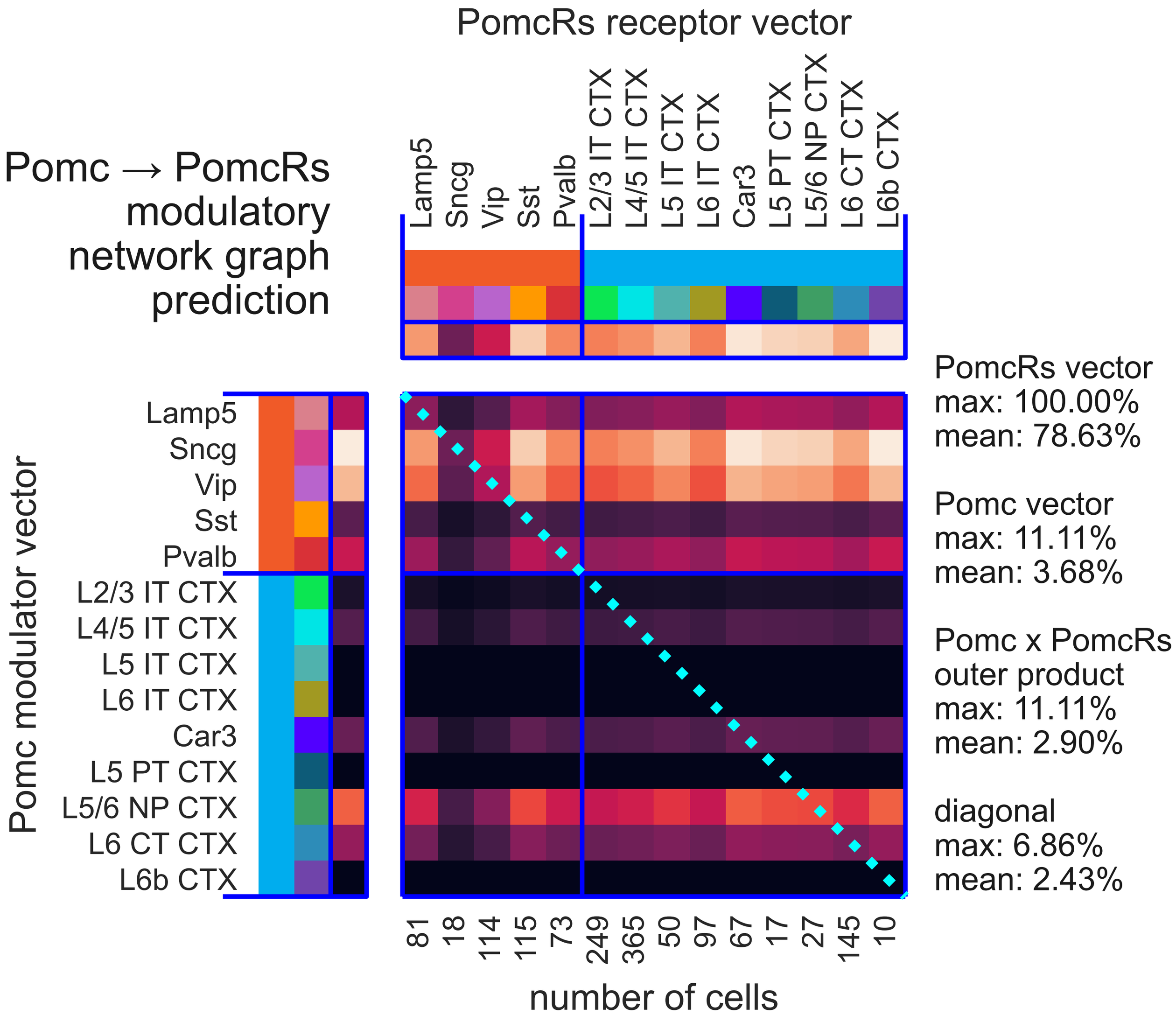

Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
PomcRs receptor vector
Pomc → PomcRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Pomc modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
PomcRs vector
max: 100%
mean: 68%
Pomc vector
max: 25%
mean: 17%
Pomc x PomcRs
outer product
max: 25%
mean: 12%
diagonal
max: 25%
mean: 12%


Y21ss thr=10 sn:12402
Visual Cortex (VIS)
PomcRs receptor vector
Pomc → PomcRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Pomc modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
PomcRs vector
max: 100.00%
mean: 74.04%
Pomc vector
max: 11.11%
mean: 3.95%
Pomc x PomcRs
outer product
max: 11.11%
mean: 2.93%
diagonal
max: 6.25%
mean: 2.79%

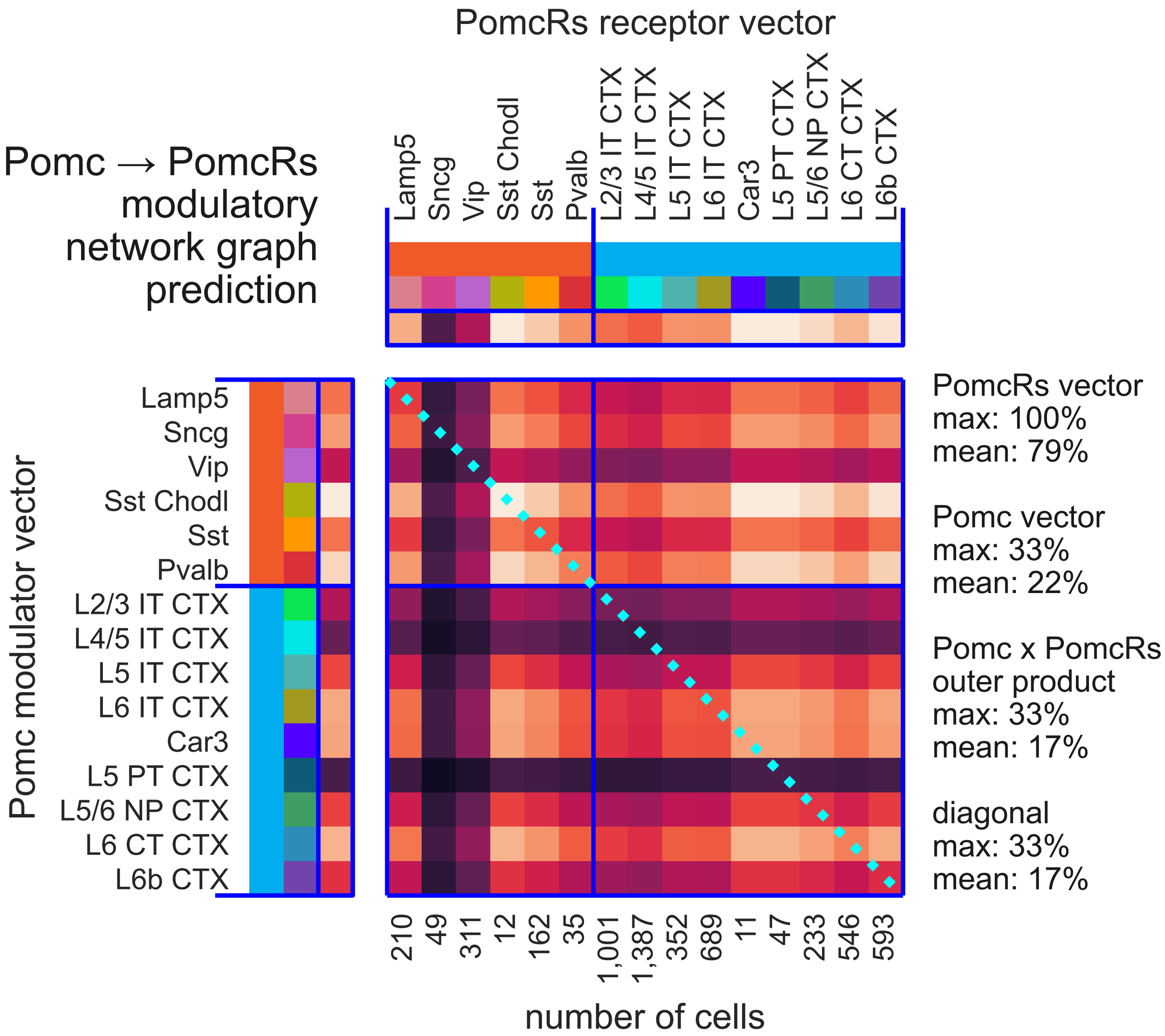
Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



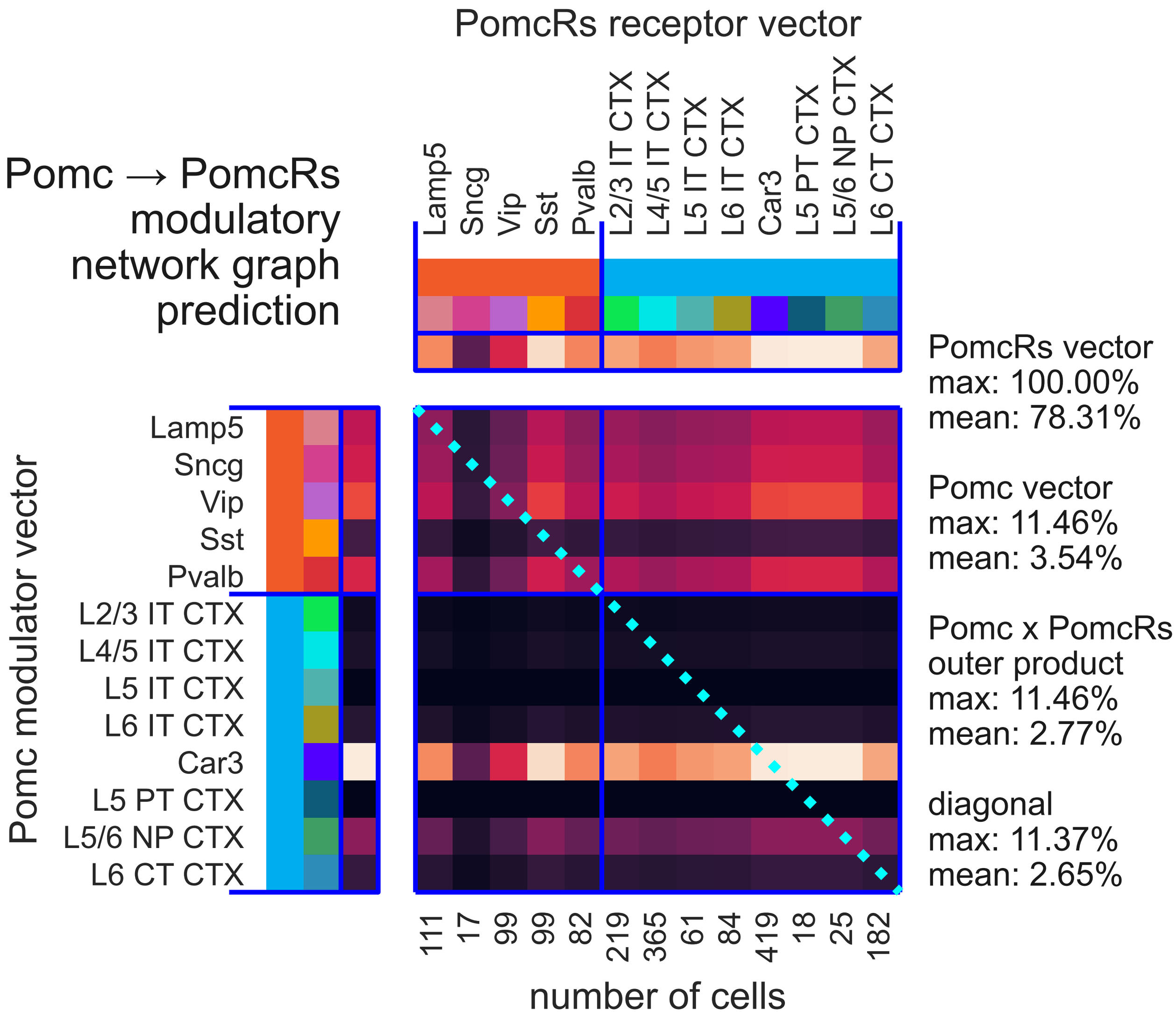
Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

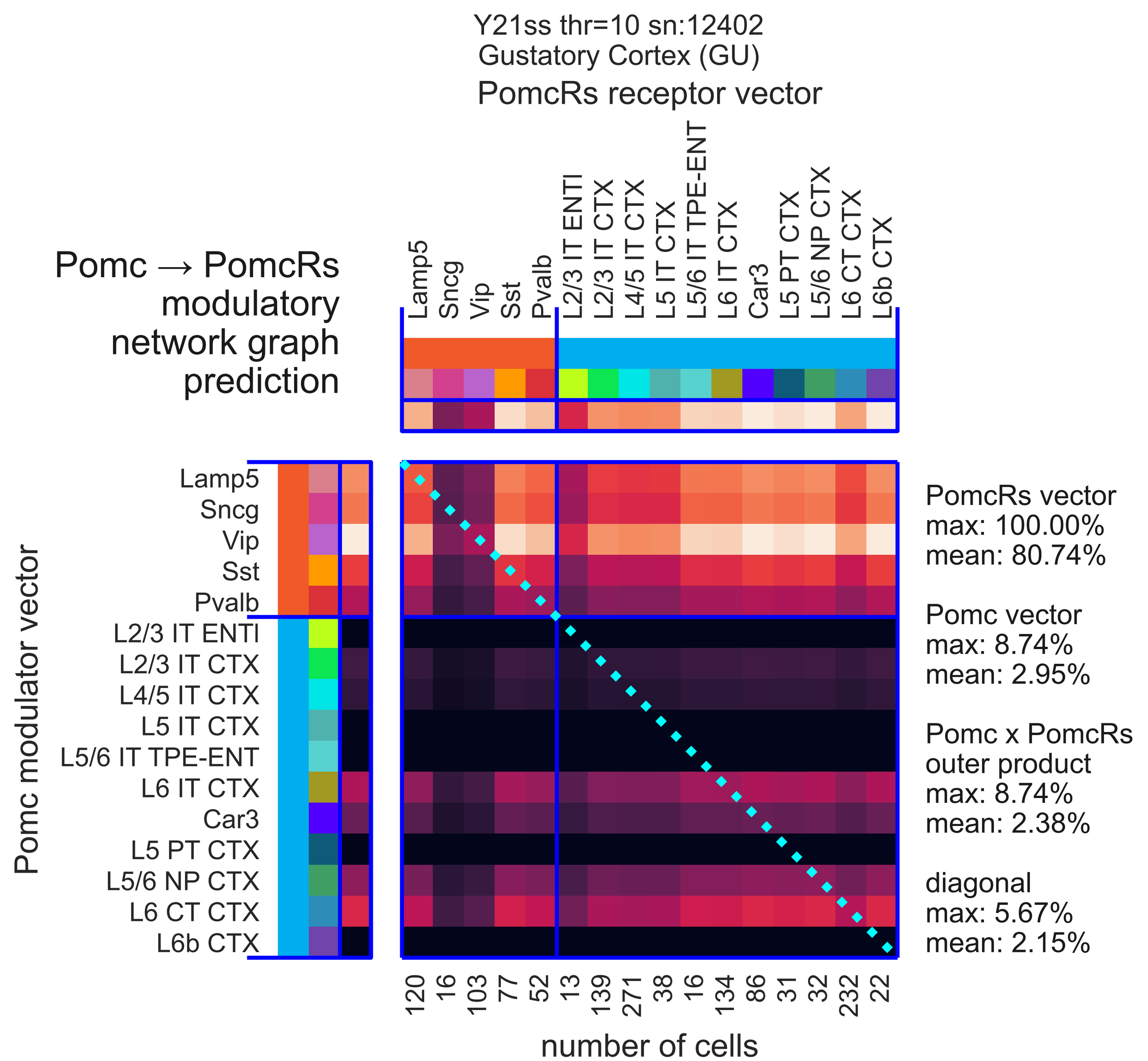


Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)

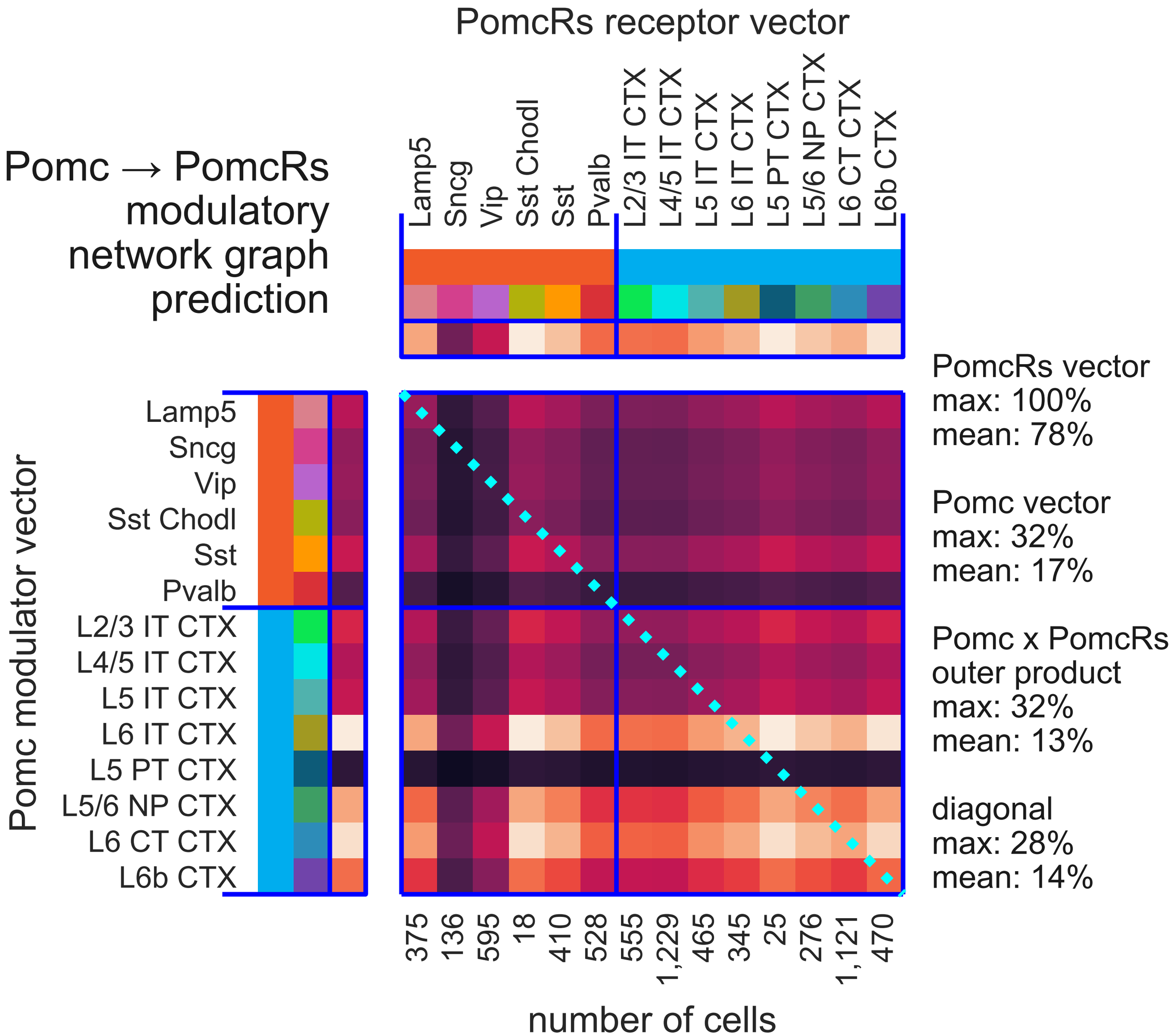


Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)




Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
PomcRs receptor vector
Pomc → PomcRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTl
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Pomc modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
PomcRs vector
max: 100.00%
mean: 80.74%
Pomc vector
max: 8.74%
mean: 2.95%
Pomc x PomcRs
outer product
max: 8.74%
mean: 2.38%
diagonal
max: 5.67%
mean: 2.15%

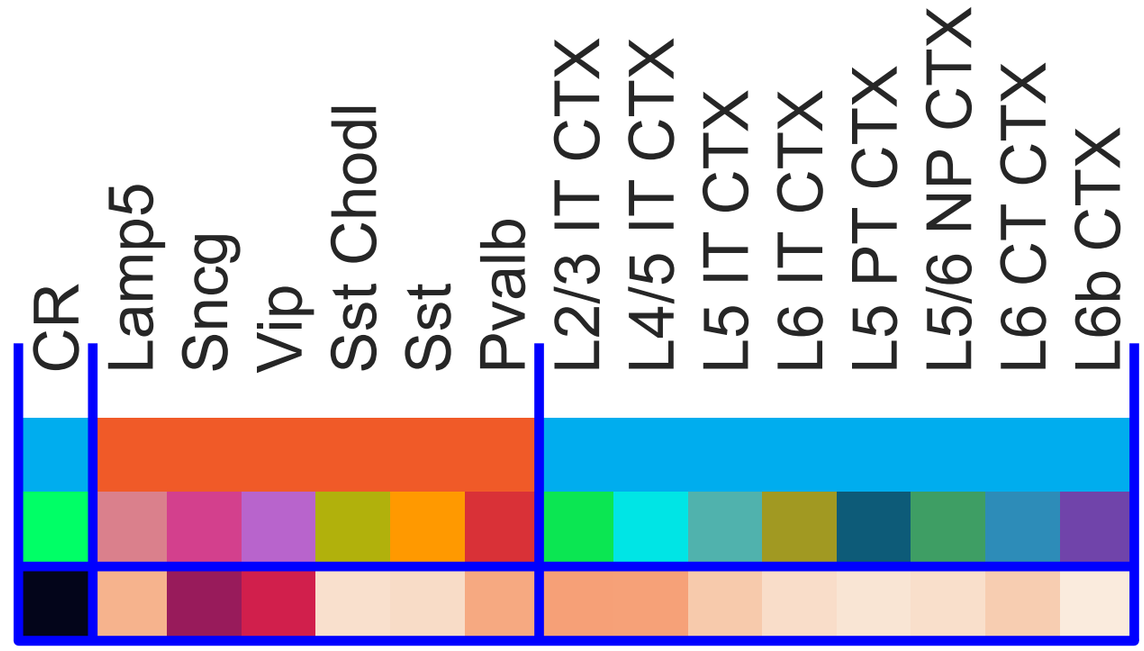
Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)

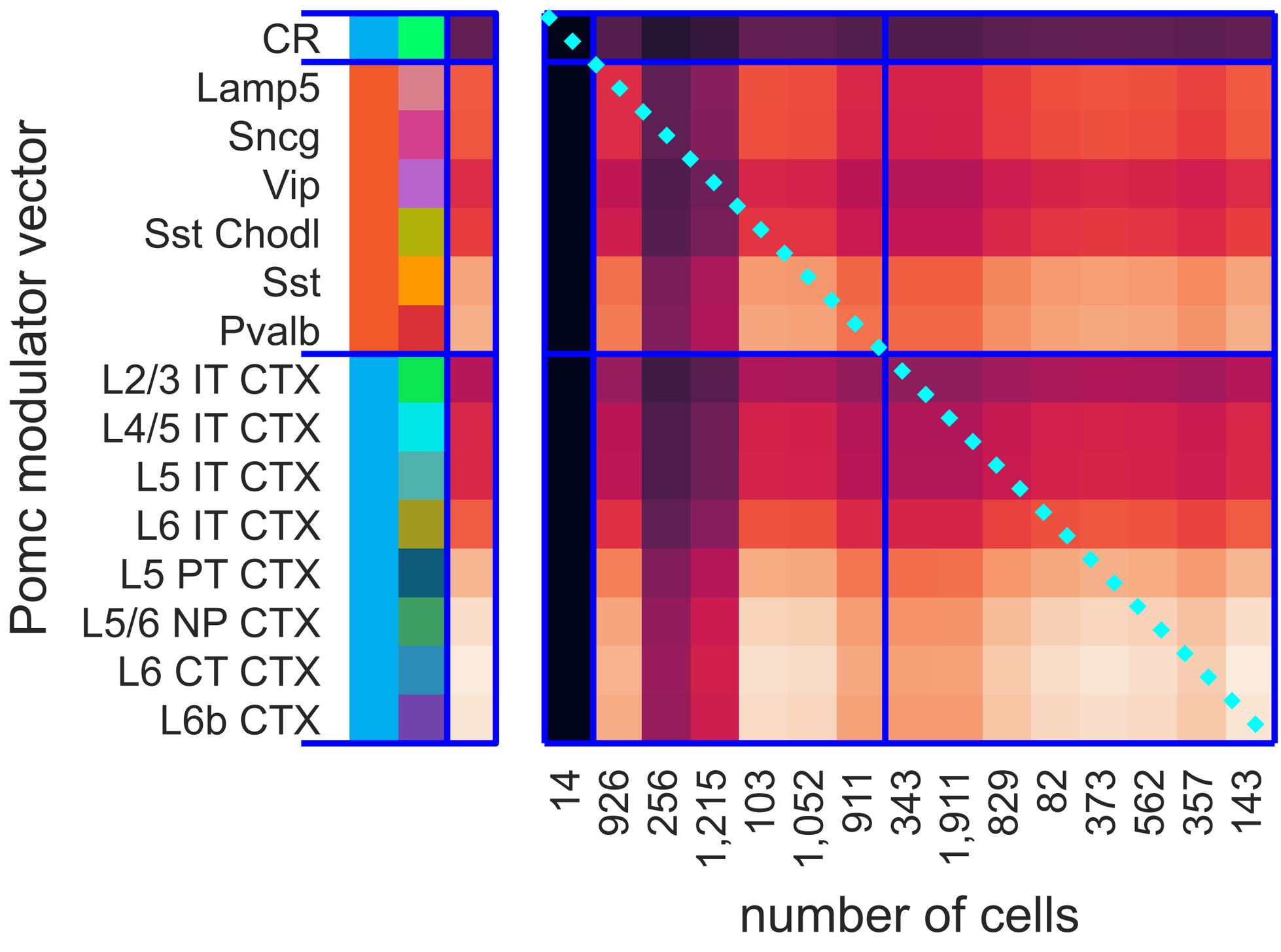


Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

PomcRs receptor vector

Pomc → PomcRs
modulatory
network graph
prediction





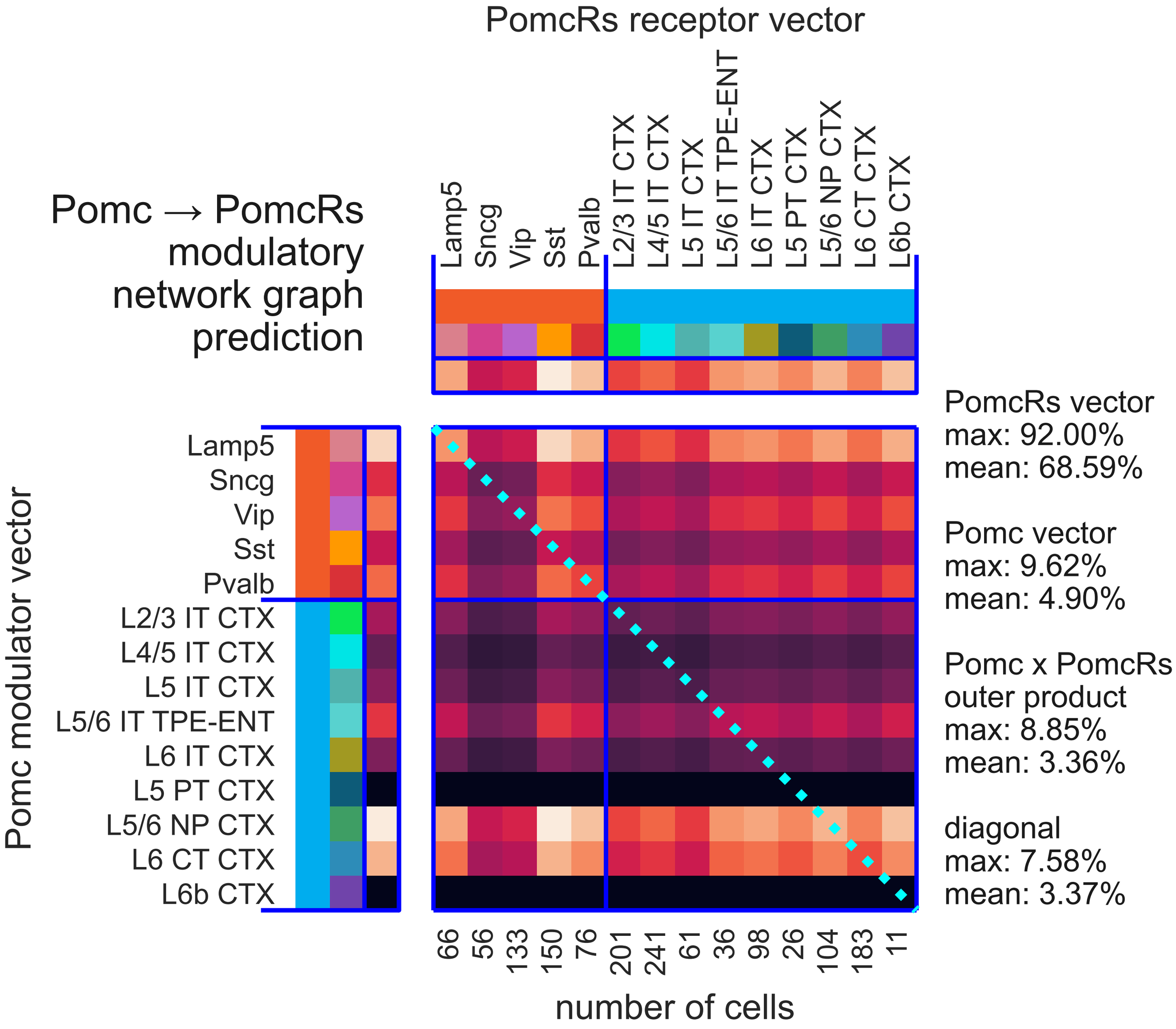
PomcRs vector
max: 100%
mean: 79%

Pomc vector
max: 28%
mean: 19%

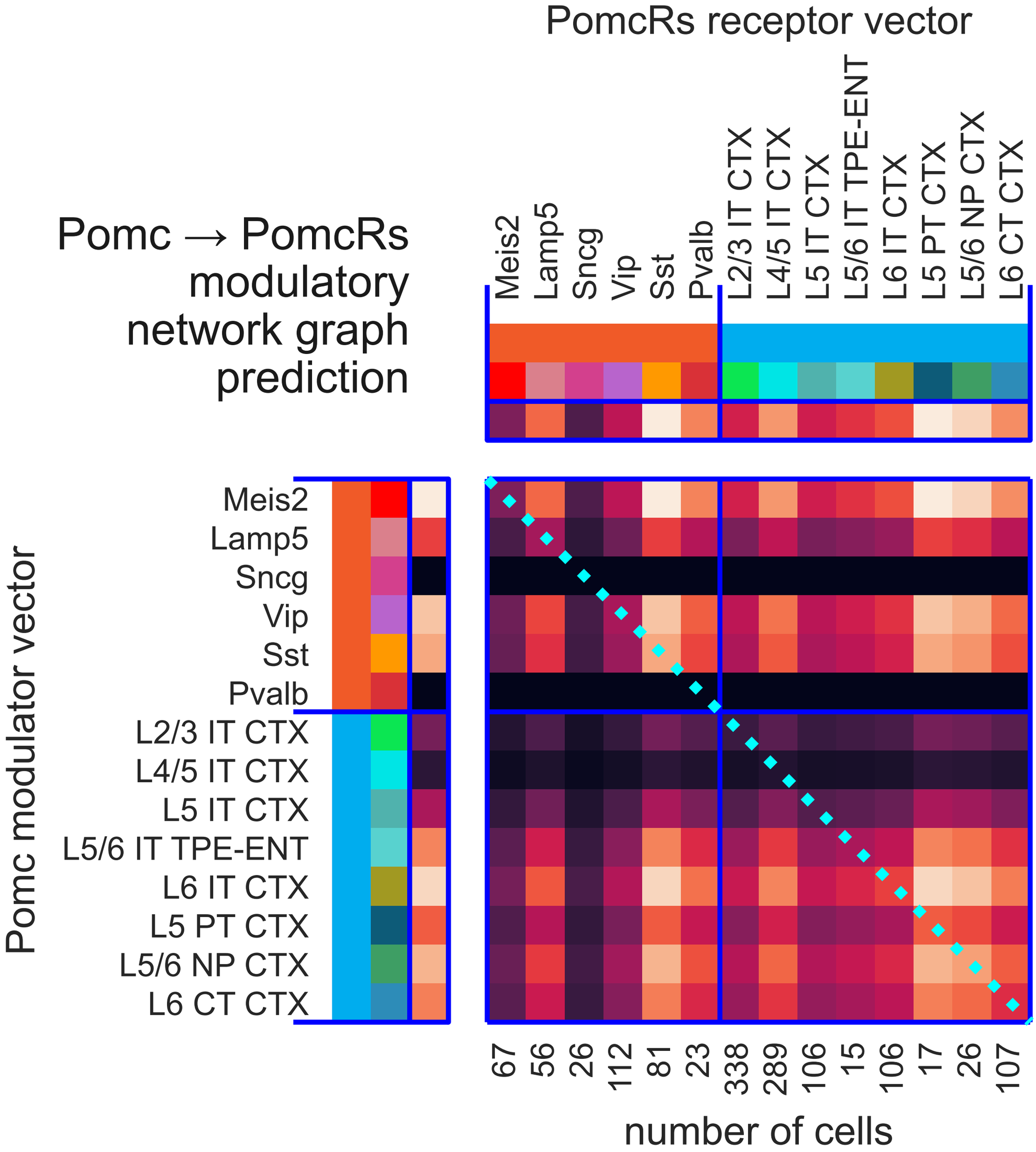
Pomc x PomcRs
outer product
max: 28%
mean: 15%

diagonal
max: 27%
mean: 16%

Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)



Y21ss thr=10 sn:12402
Orbital Cortex (ORB)



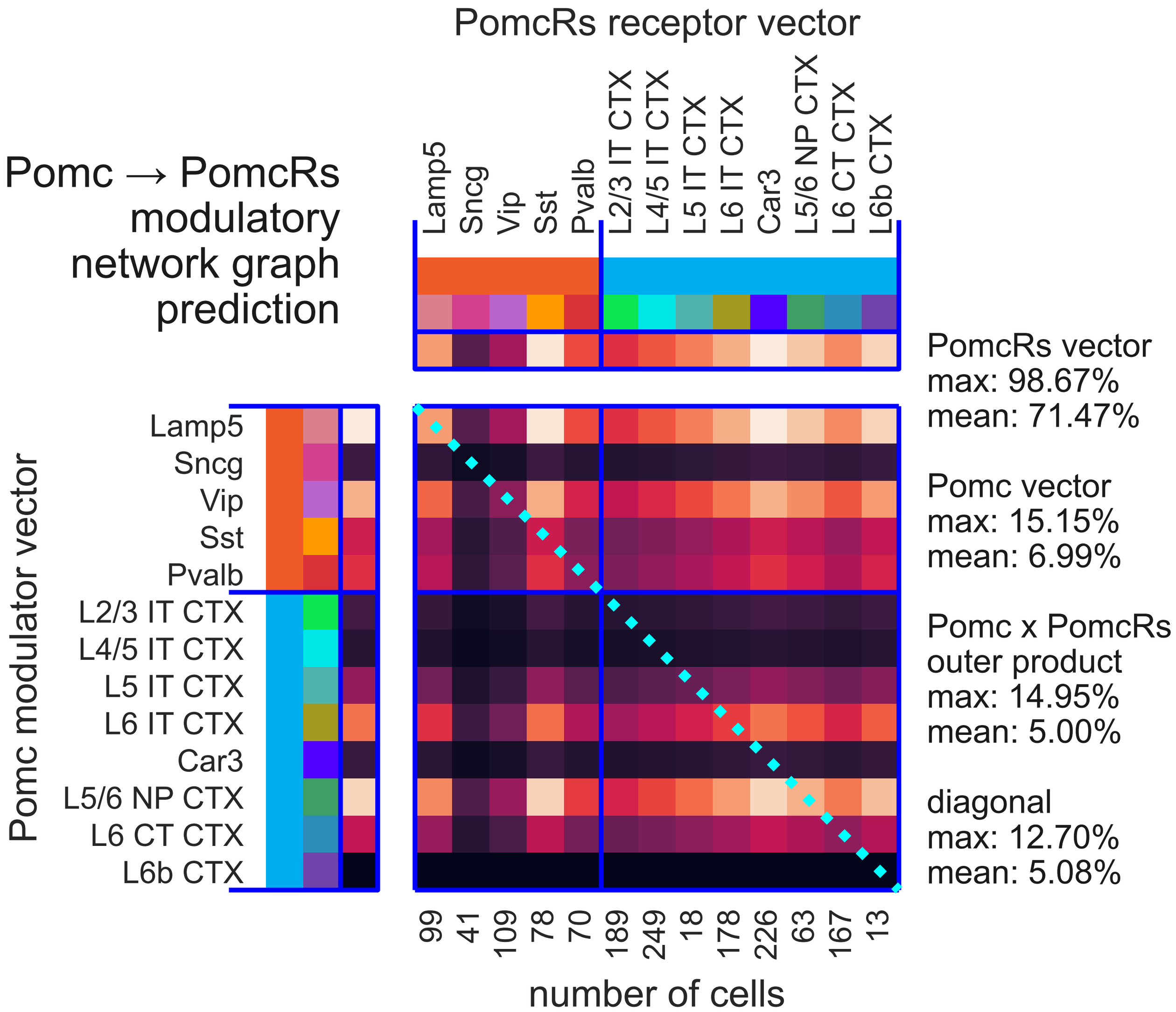
PomcRs vector
max: 94.12%
mean: 61.34%

Pomc vector
max: 8.96%
mean: 5.18%

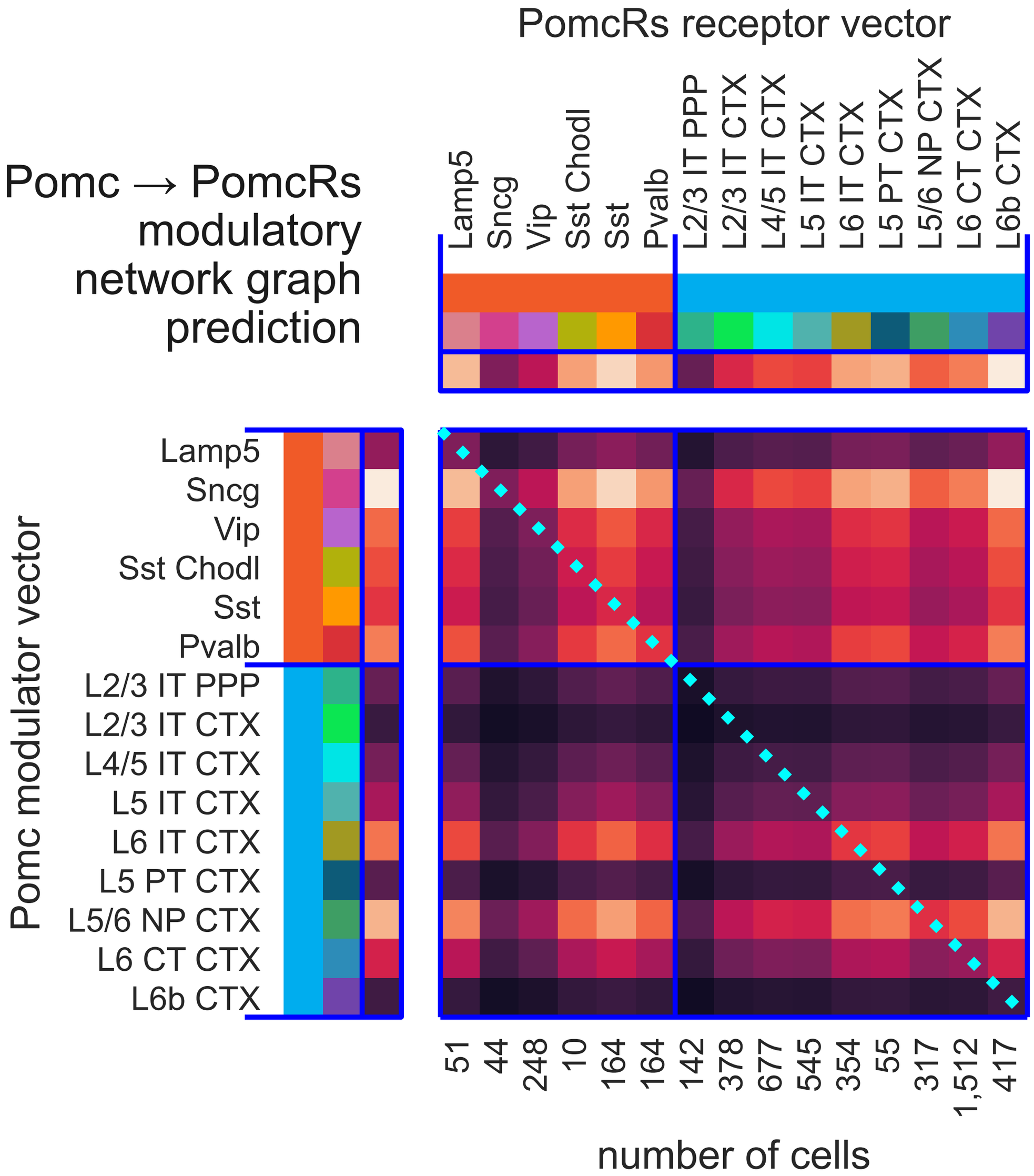
Pomc x PomcRs
outer product
max: 8.43%
mean: 3.18%

diagonal
max: 6.95%
mean: 3.29%

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)



Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)

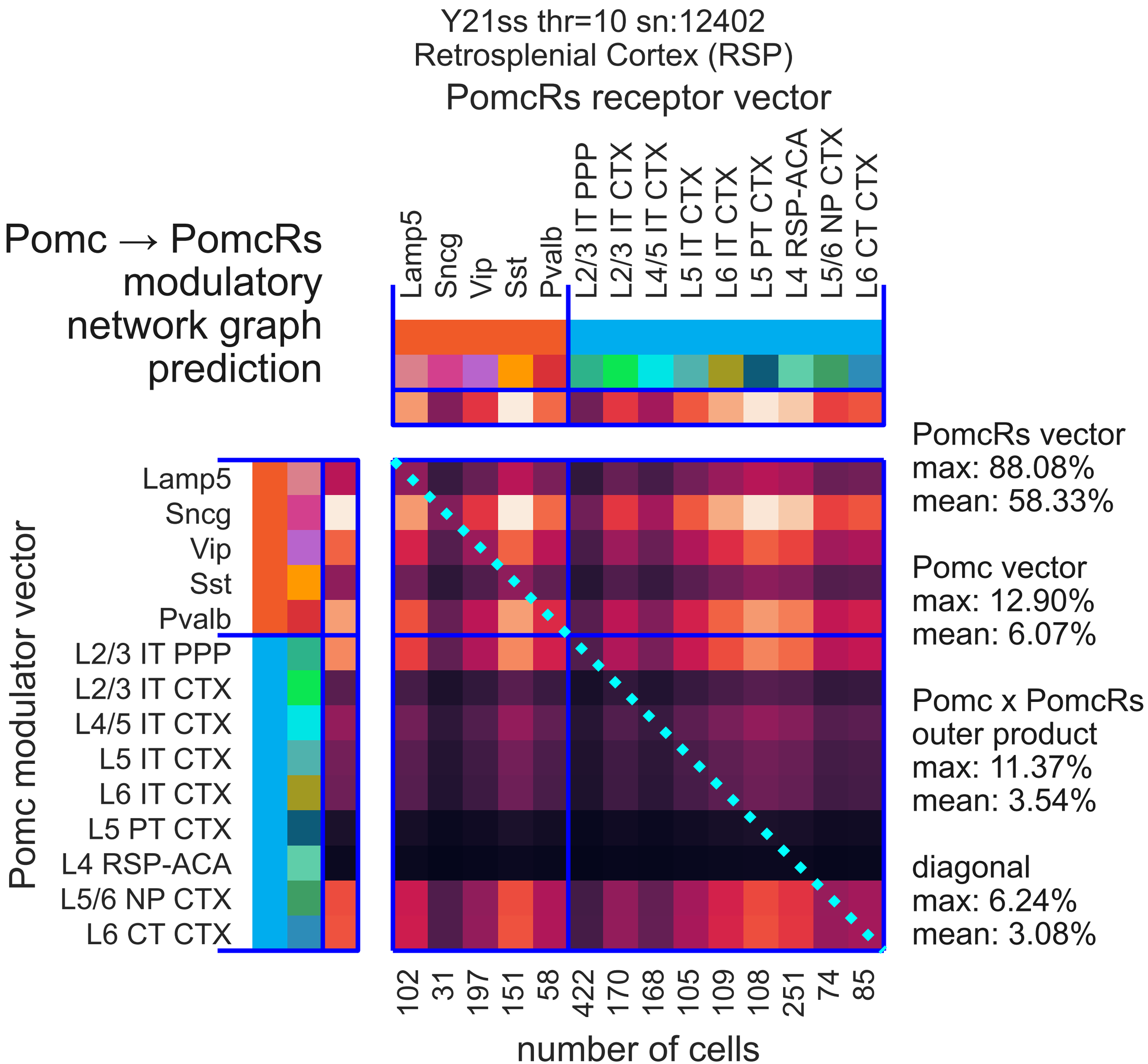


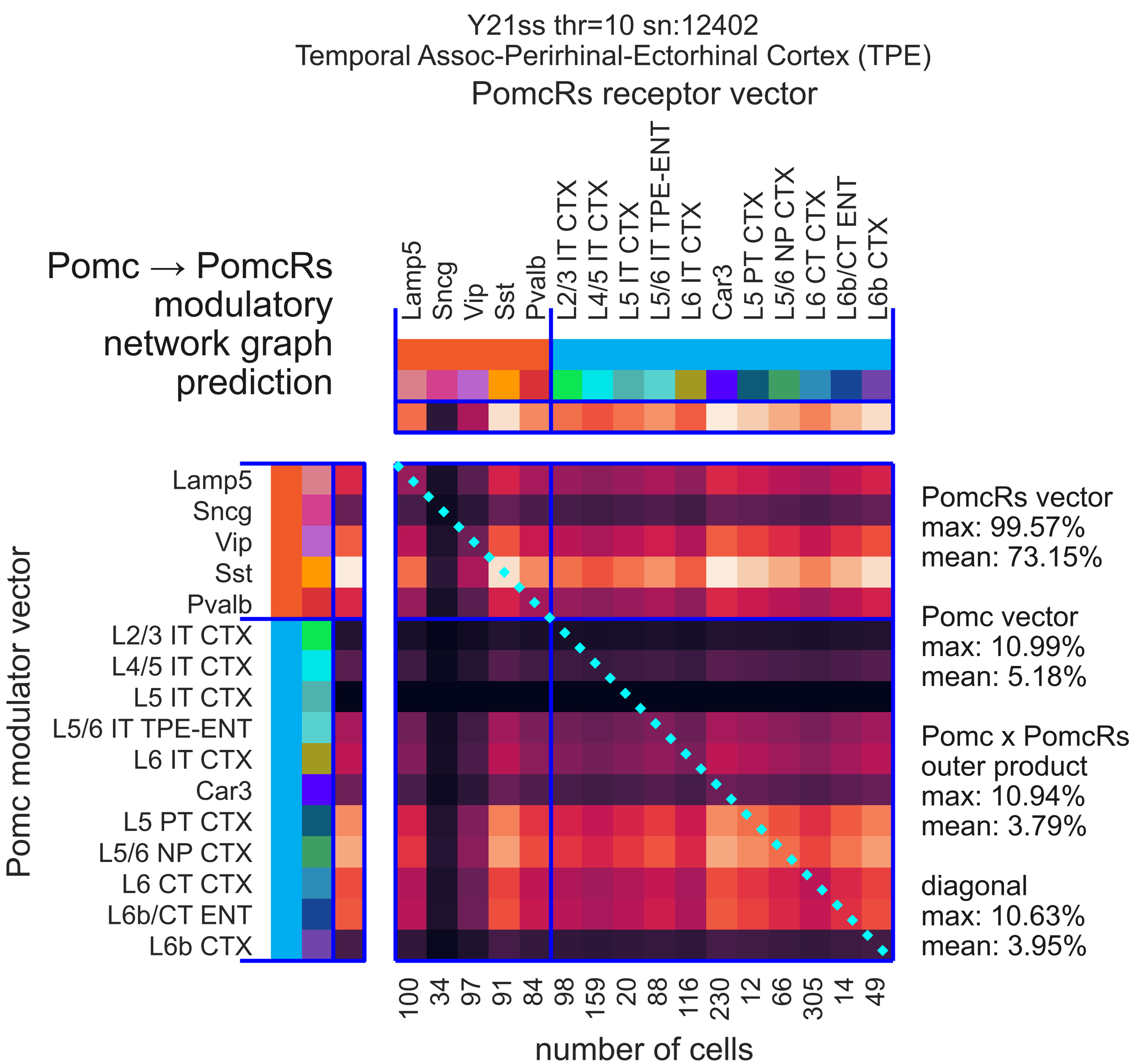
PomcRs vector
max: 99.04%
mean: 67.80%

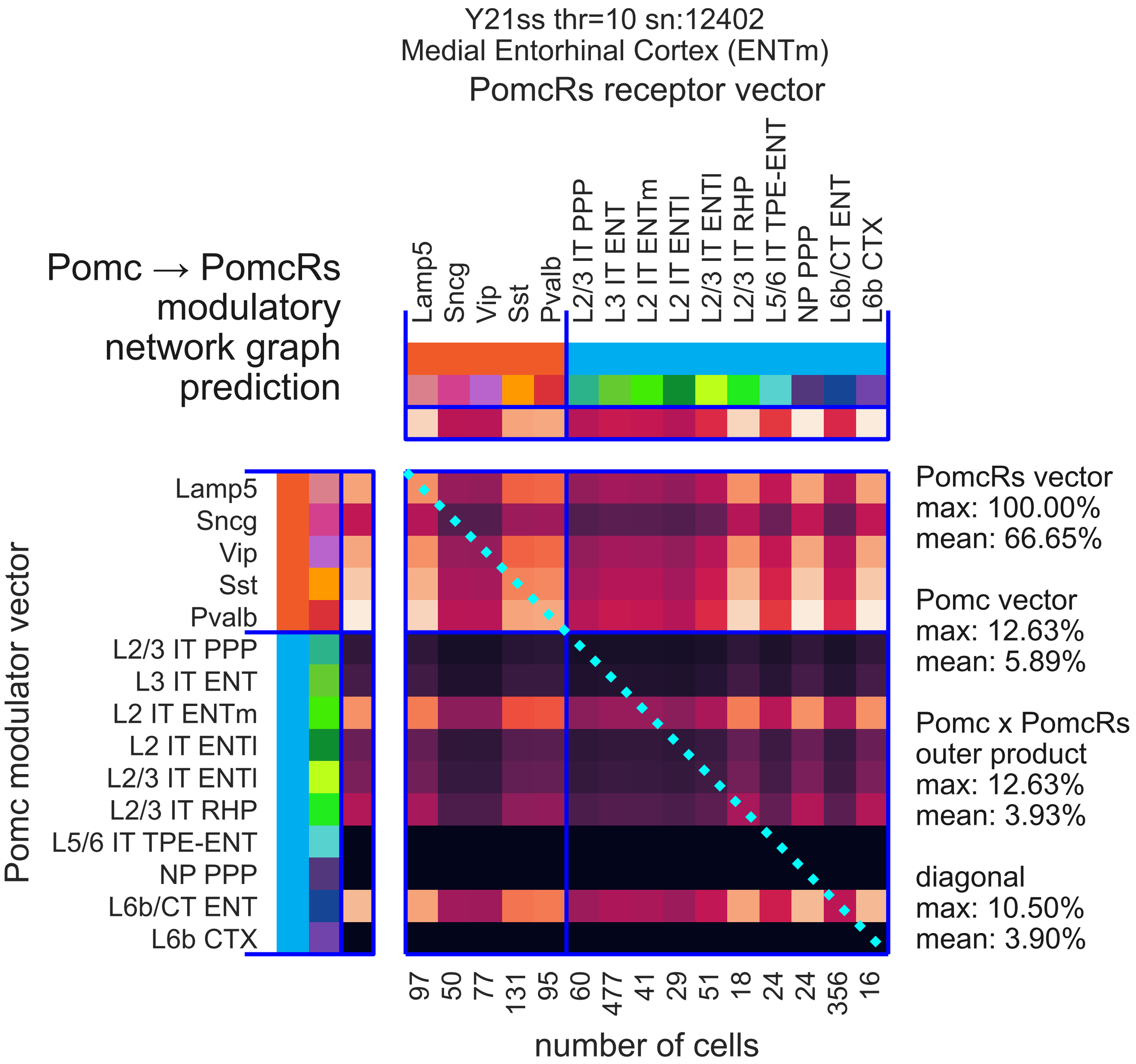
Pomc vector
max: 15.91%
mean: 8.05%

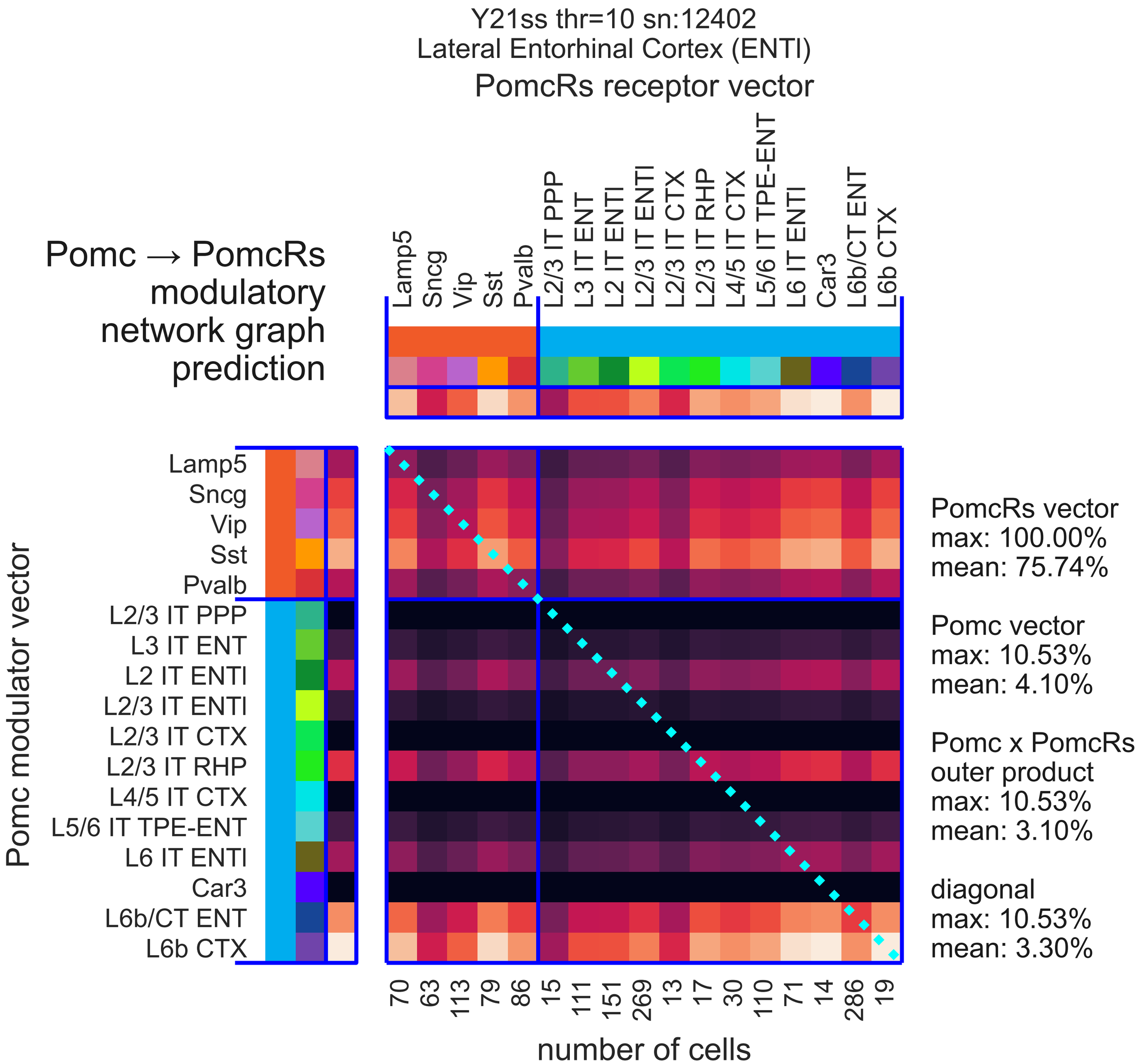
Pomc x PomcRs
outer product
max: 15.76%
mean: 5.46%

diagonal
max: 9.13%
mean: 5.31%

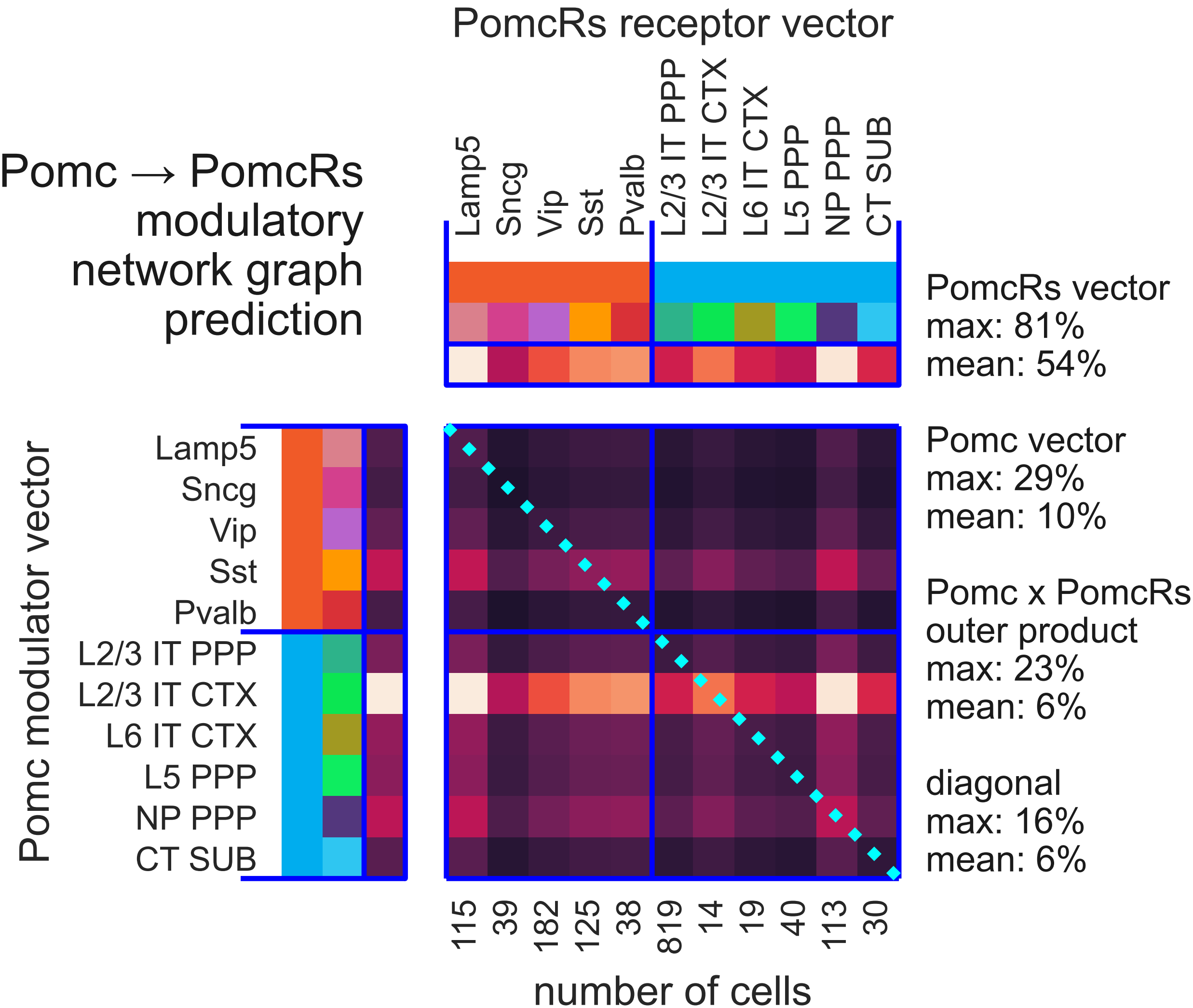

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
PomcRs receptor vector
Pomc → PomcRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Pomc modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
PomcRs vector
max: 88.08%
mean: 58.33%
Pomc vector
max: 12.90%
mean: 6.07%
Pomc x PomcRs
outer product
max: 11.37%
mean: 3.54%
diagonal
max: 6.24%
mean: 3.08%


Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)
PomcRs receptor vector
Pomc → PomcRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b/CT ENT
L6b CTX
Pomc modulator vector
100
34
97
91
84
98
159
20
88
116
230
12
66
305
14
49
number of cells
PomcRs vector
max: 99.57%
mean: 73.15%
Pomc vector
max: 10.99%
mean: 5.18%
Pomc x PomcRs
outer product
max: 10.94%
mean: 3.79%
diagonal
max: 10.63%
mean: 3.95%

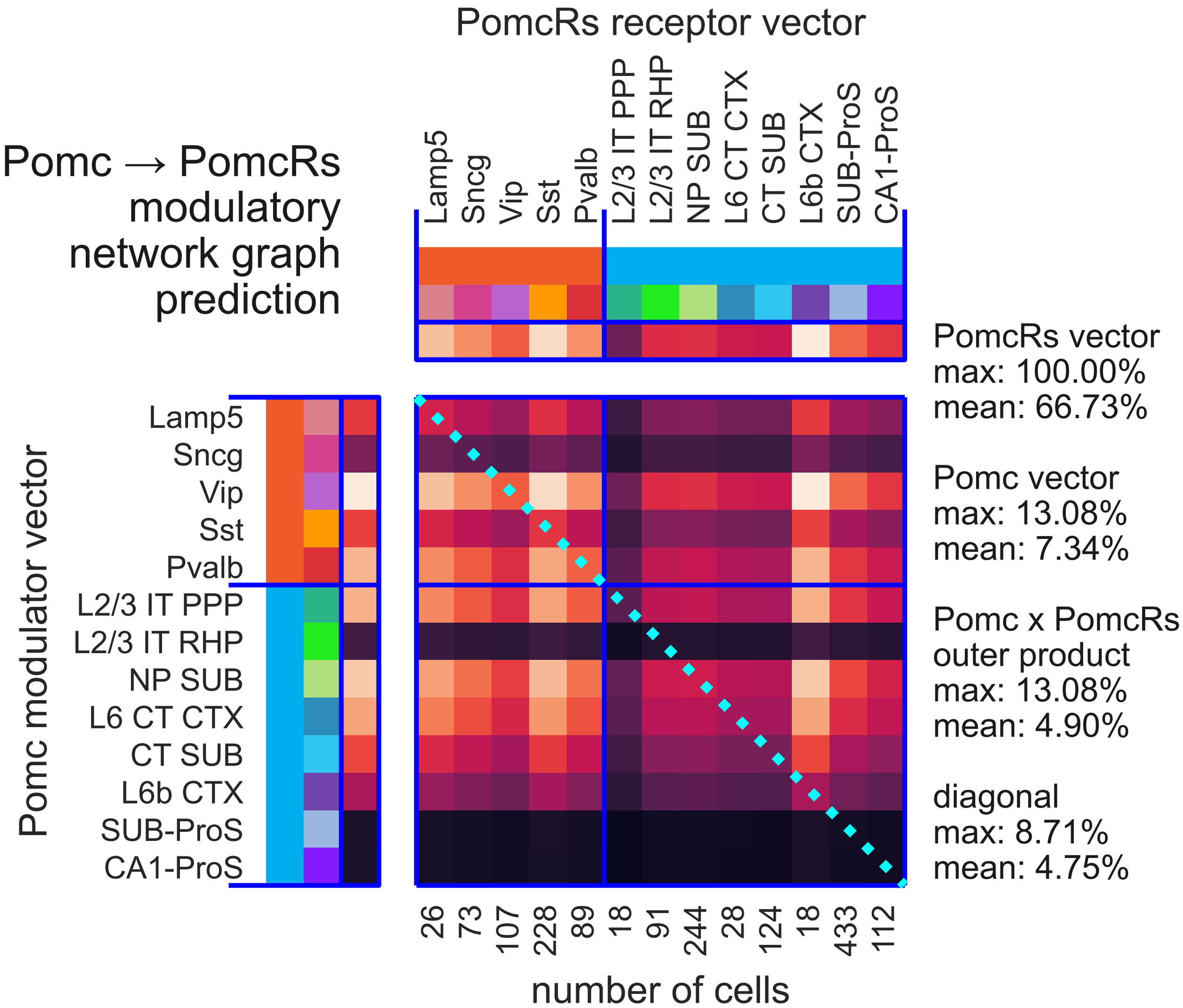

Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
PomcRs receptor vector
Pomc → PomcRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Pomc modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
PomcRs vector
max: 100.00%
mean: 66.65%
Pomc vector
max: 12.63%
mean: 5.89%
Pomc x PomcRs
outer product
max: 12.63%
mean: 3.93%
diagonal
max: 10.50%
mean: 3.90%

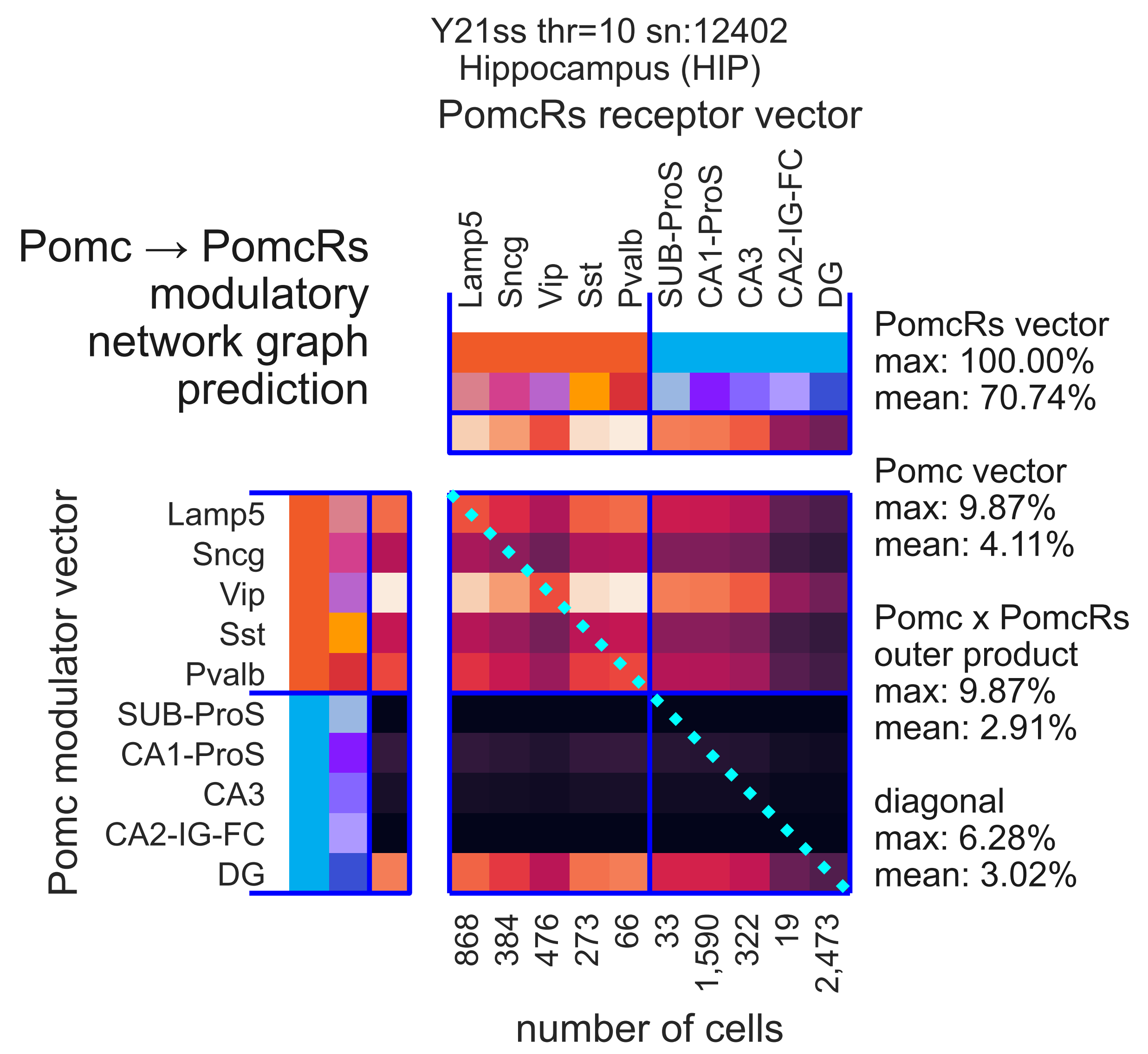

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
PomcRs receptor vector
Pomc → PomcRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Pomc modulator vector
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells
PomcRs vector
max: 100.00%
mean: 75.74%
Pomc vector
max: 10.53%
mean: 4.10%
Pomc x PomcRs
outer product
max: 10.53%
mean: 3.10%
diagonal
max: 10.53%
mean: 3.30%

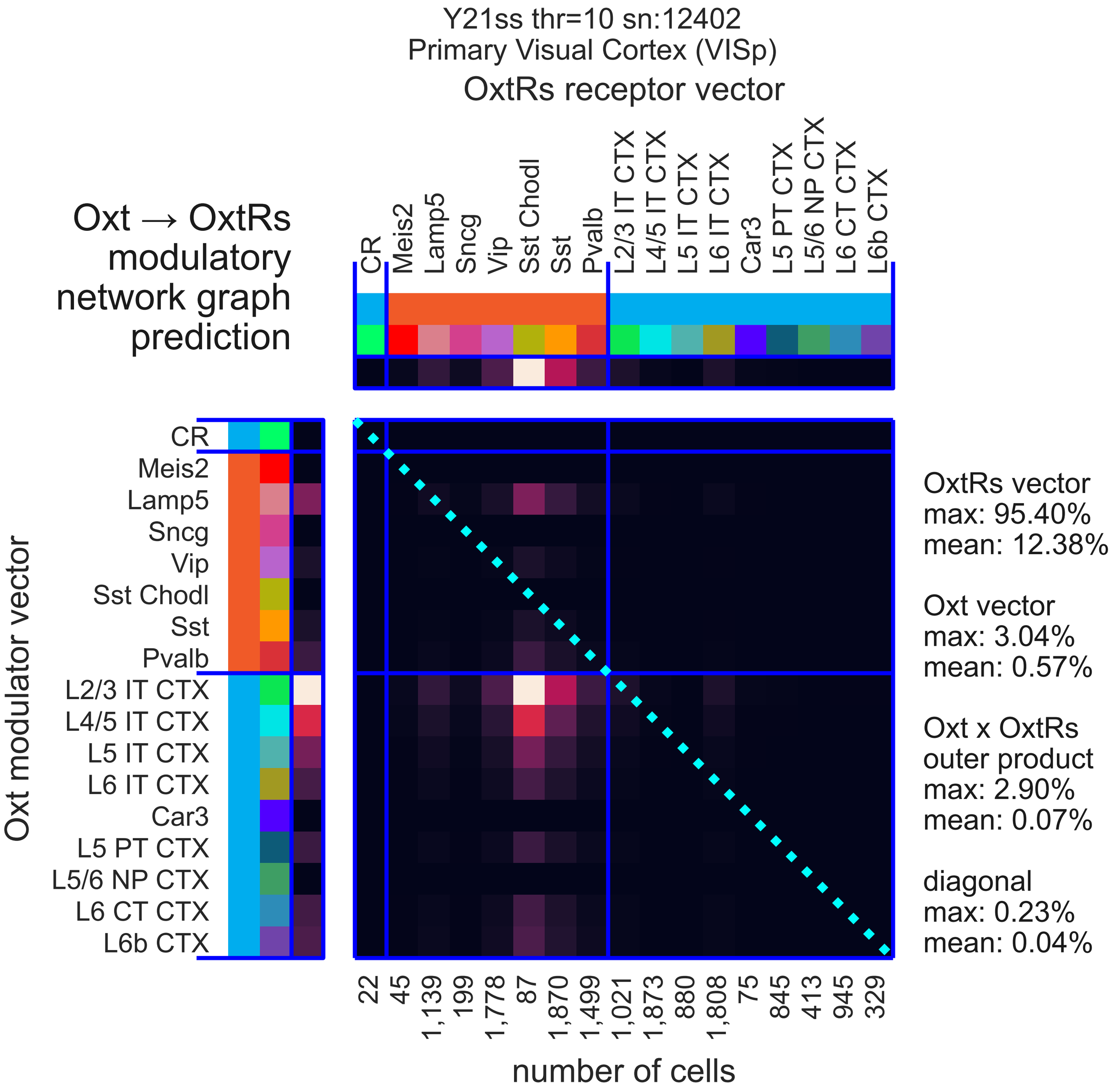
Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)



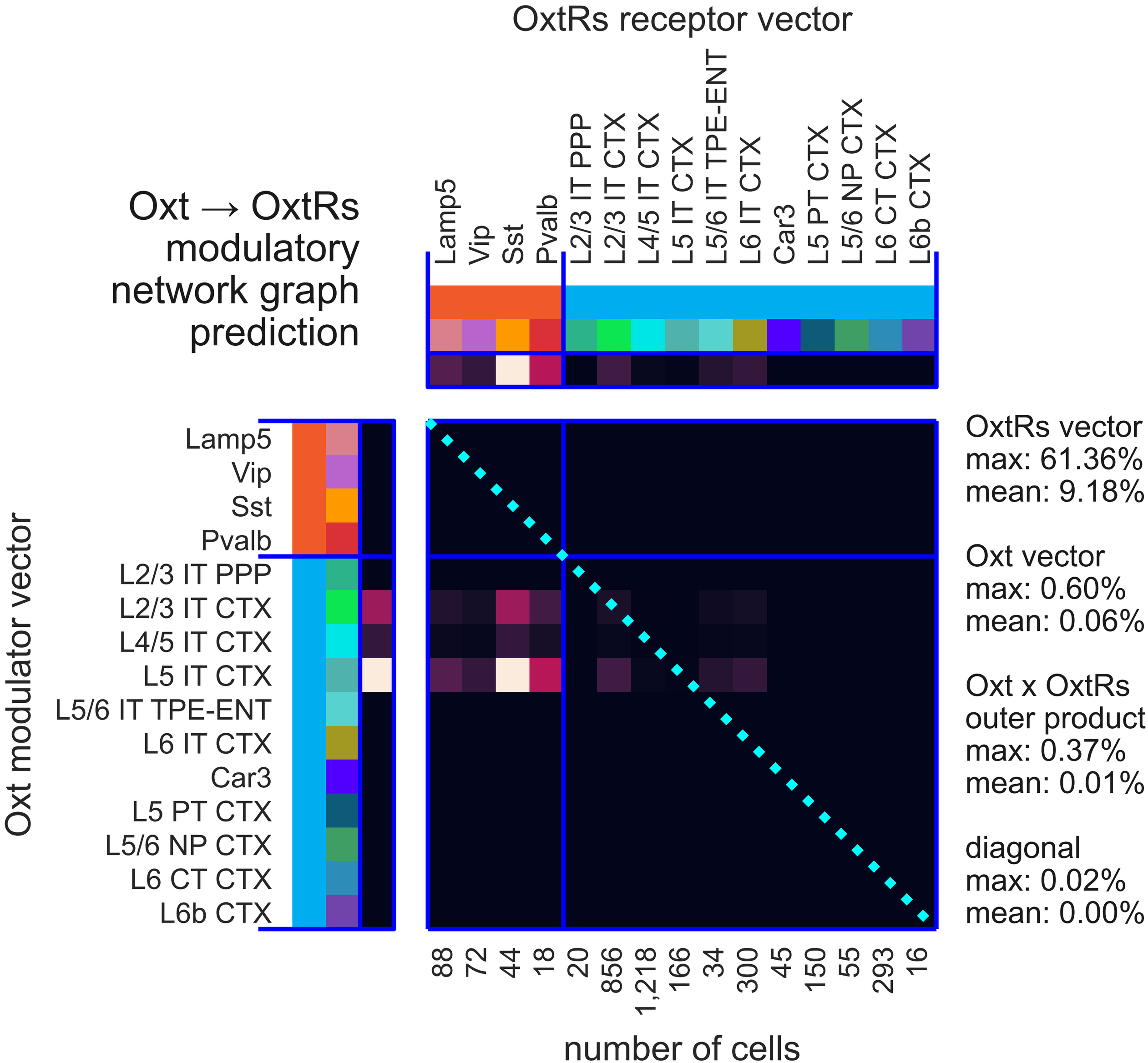
Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)



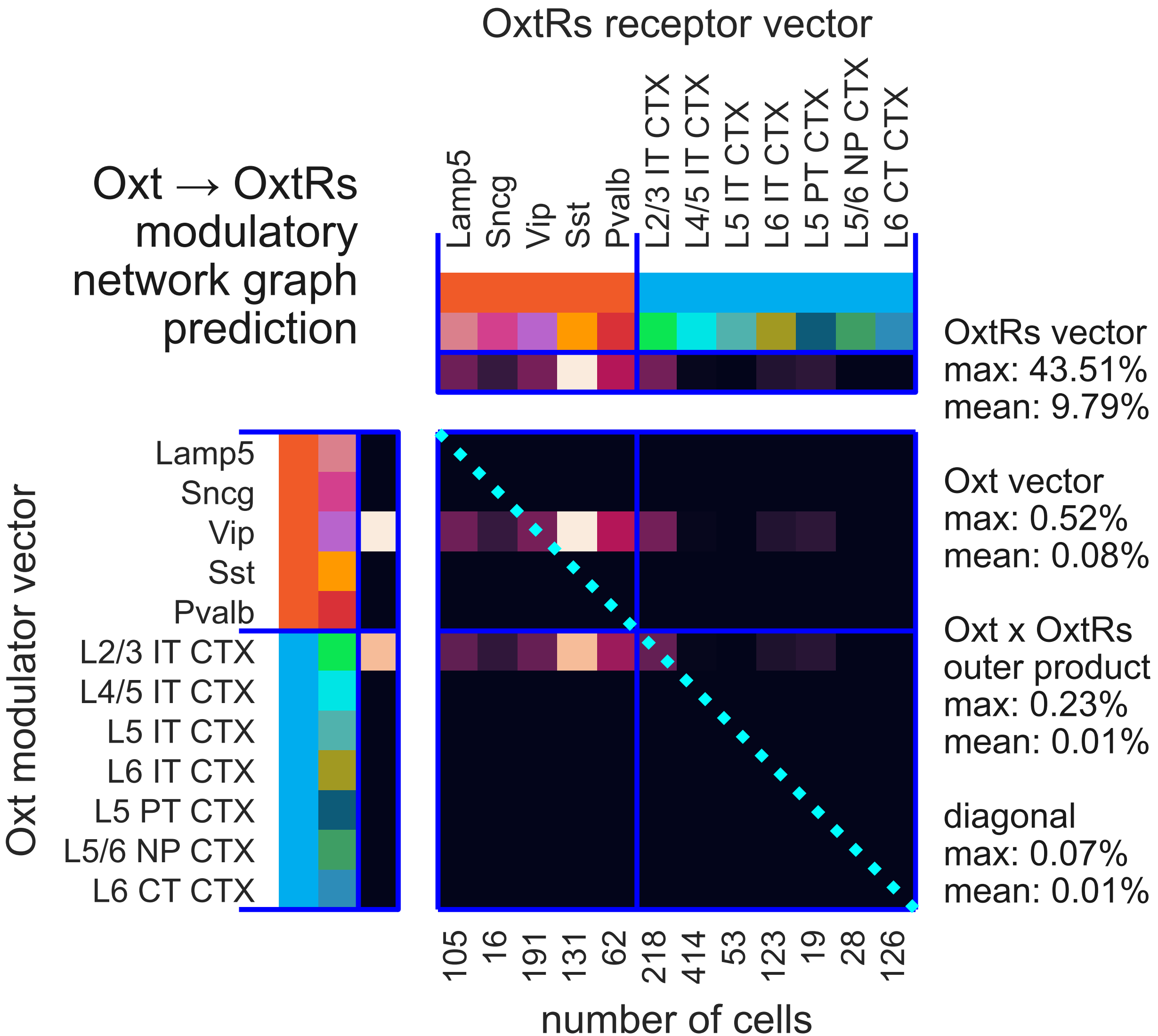

Y21ss thr=10 sn:12402
Hippocampus (HIP)
PomcRs receptor vector
Pomc → PomcRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
SUB-ProS
CA1-ProS
CA3
CA2-IG-FC
DG
PomcRs vector
max: 100.00%
mean: 70.74%
Pomc vector
max: 9.87%
mean: 4.11%
Pomc modulator vector
Pomc x PomcRs
outer product
max: 9.87%
mean: 2.91%
diagonal
max: 6.28%
mean: 3.02%
868
384
476
273
66
33
1,590
322
19
2,473
number of cells


Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)
OxtRs receptor vector
Oxt → OxtRs
modulatory
network graph
prediction
CR
Meis2
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Oxt modulator vector
22
45
1,139
199
1,778
87
1,870
1,499
1,021
1,873
880
1,808
75
845
413
945
329
number of cells
OxtRs vector
max: 95.40%
mean: 12.38%
Oxt vector
max: 3.04%
mean: 0.57%
Oxt x OxtRs
outer product
max: 2.90%
mean: 0.07%
diagonal
max: 0.23%
mean: 0.04%

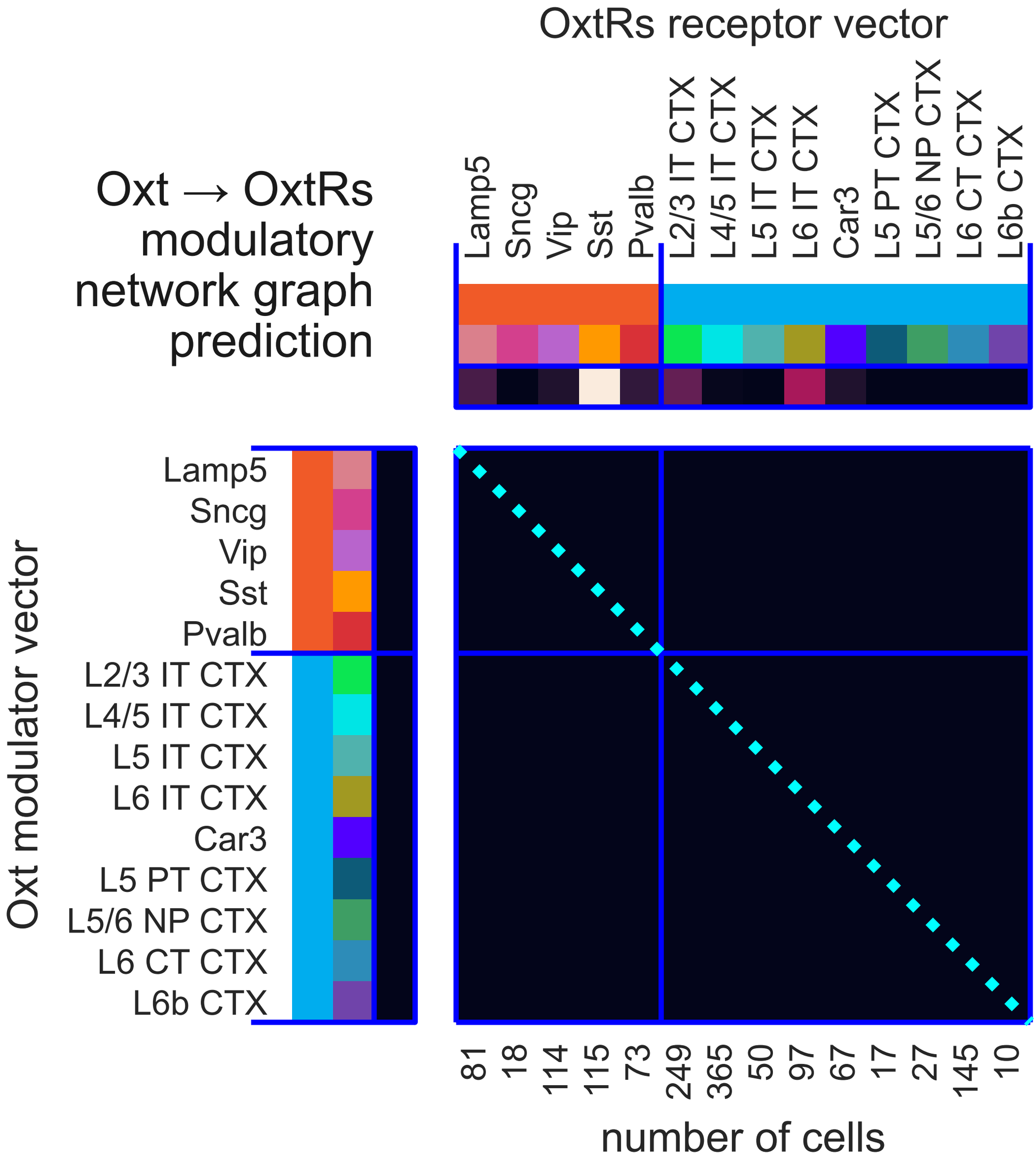
Y21ss thr=10 sn:12402
Visual Cortex (VIS)



Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)



Y21ss thr=10 sn:12402
Auditory Cortex (AUD)

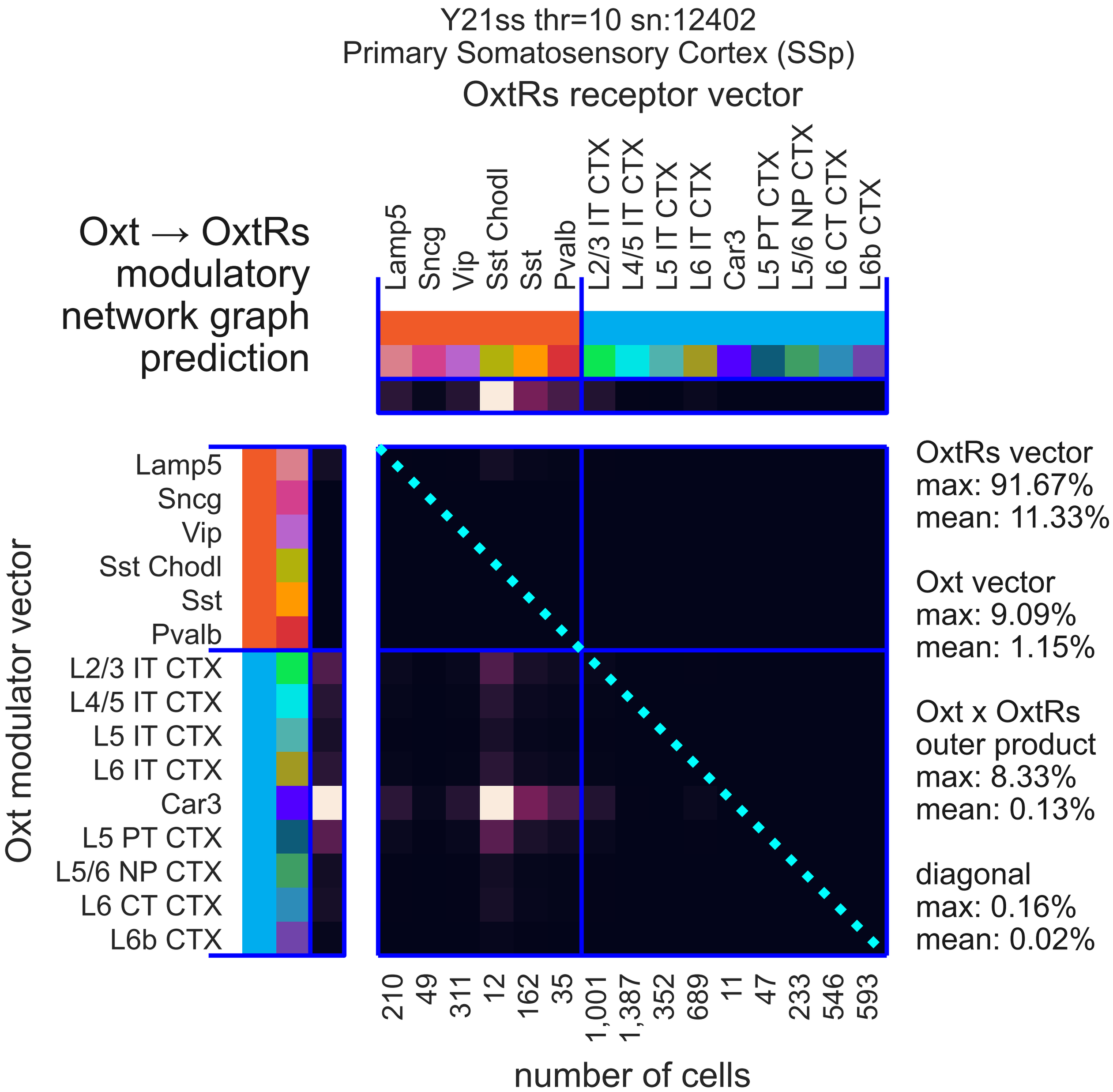


OxtRs vector
max: 52.17%
mean: 8.13%

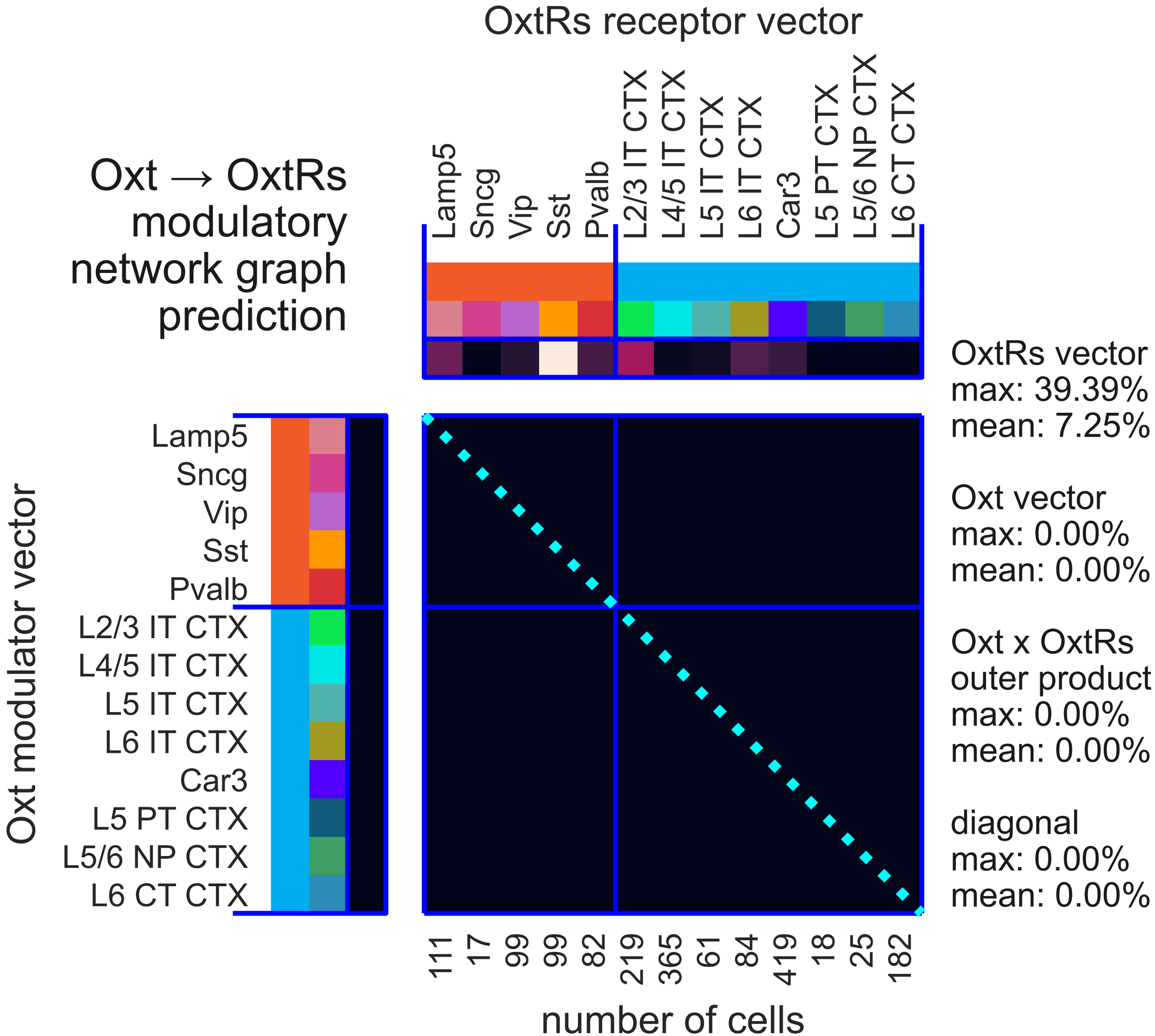
Oxt vector
max: 0.00%
mean: 0.00%

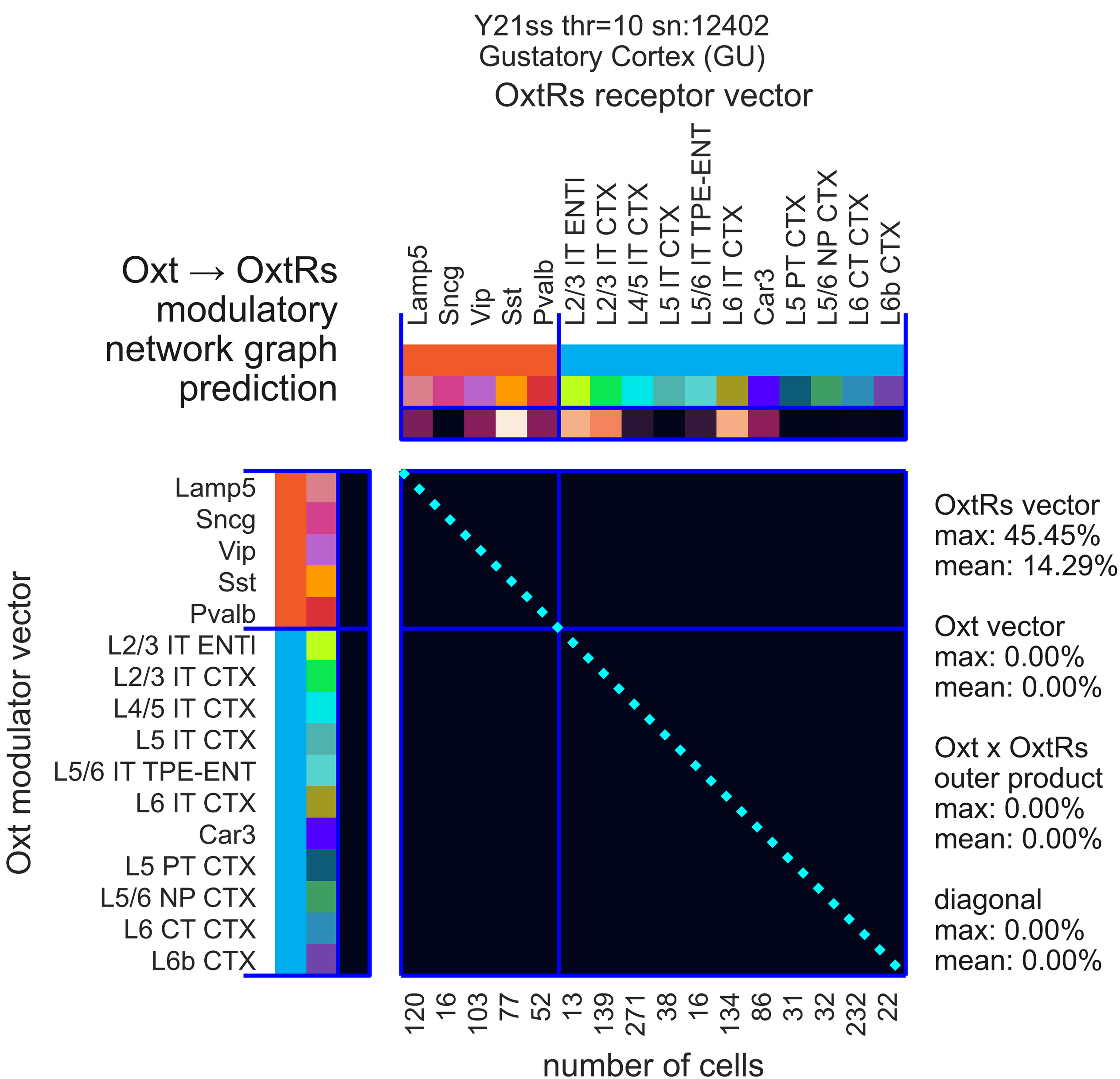
Oxt x OxtRs
outer product
max: 0.00%
mean: 0.00%

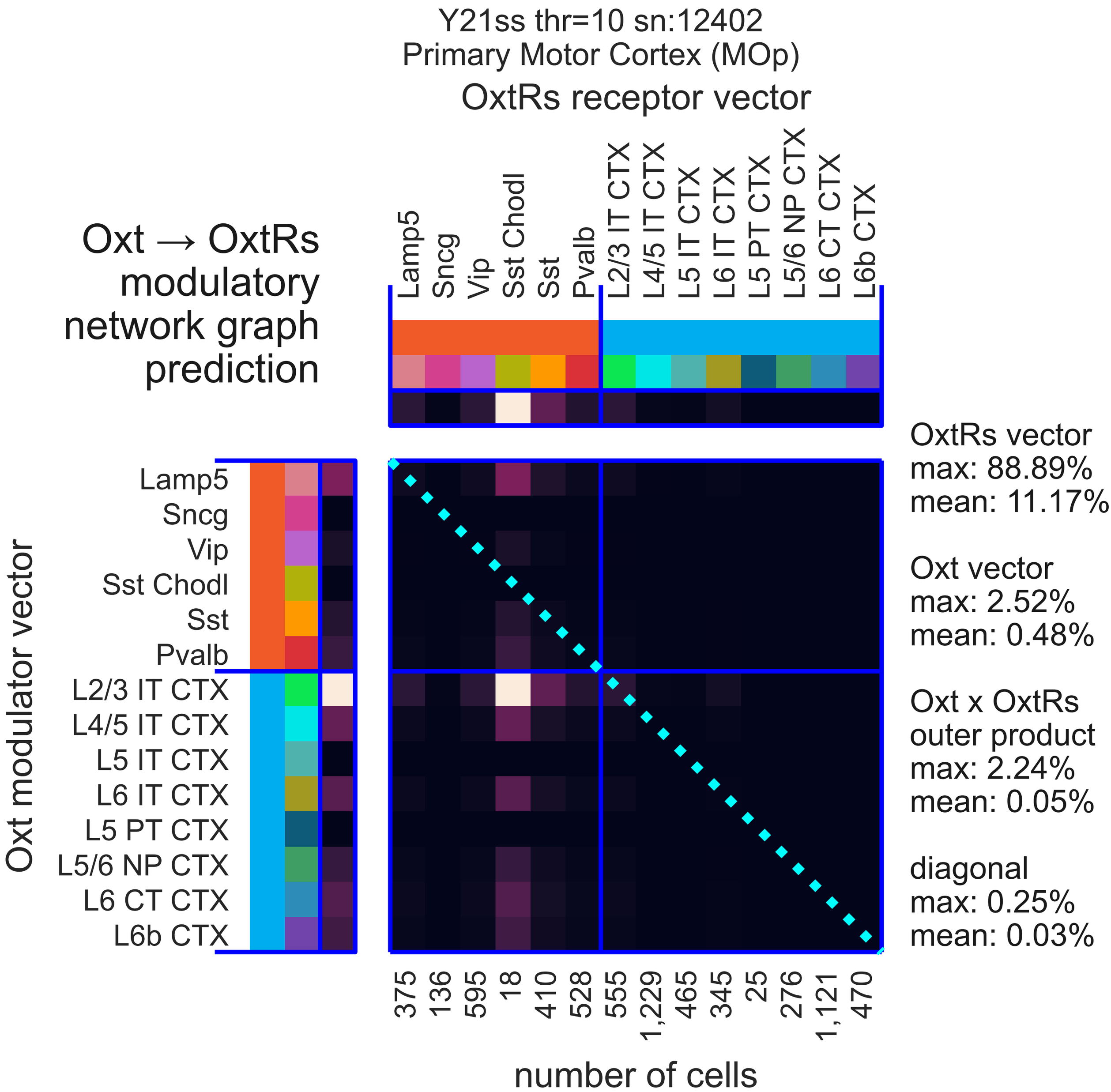
diagonal
max: 0.00%
mean: 0.00%


Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)
OxtRs receptor vector
Oxt → OxtRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Oxt modulator vector
210
49
311
12
162
35
1,001
1,387
352
689
11
47
233
546
593
number of cells
OxtRs vector
max: 91.67%
mean: 11.33%
Oxt vector
max: 9.09%
mean: 1.15%
Oxt x OxtRs
outer product
max: 8.33%
mean: 0.13%
diagonal
max: 0.16%
mean: 0.02%

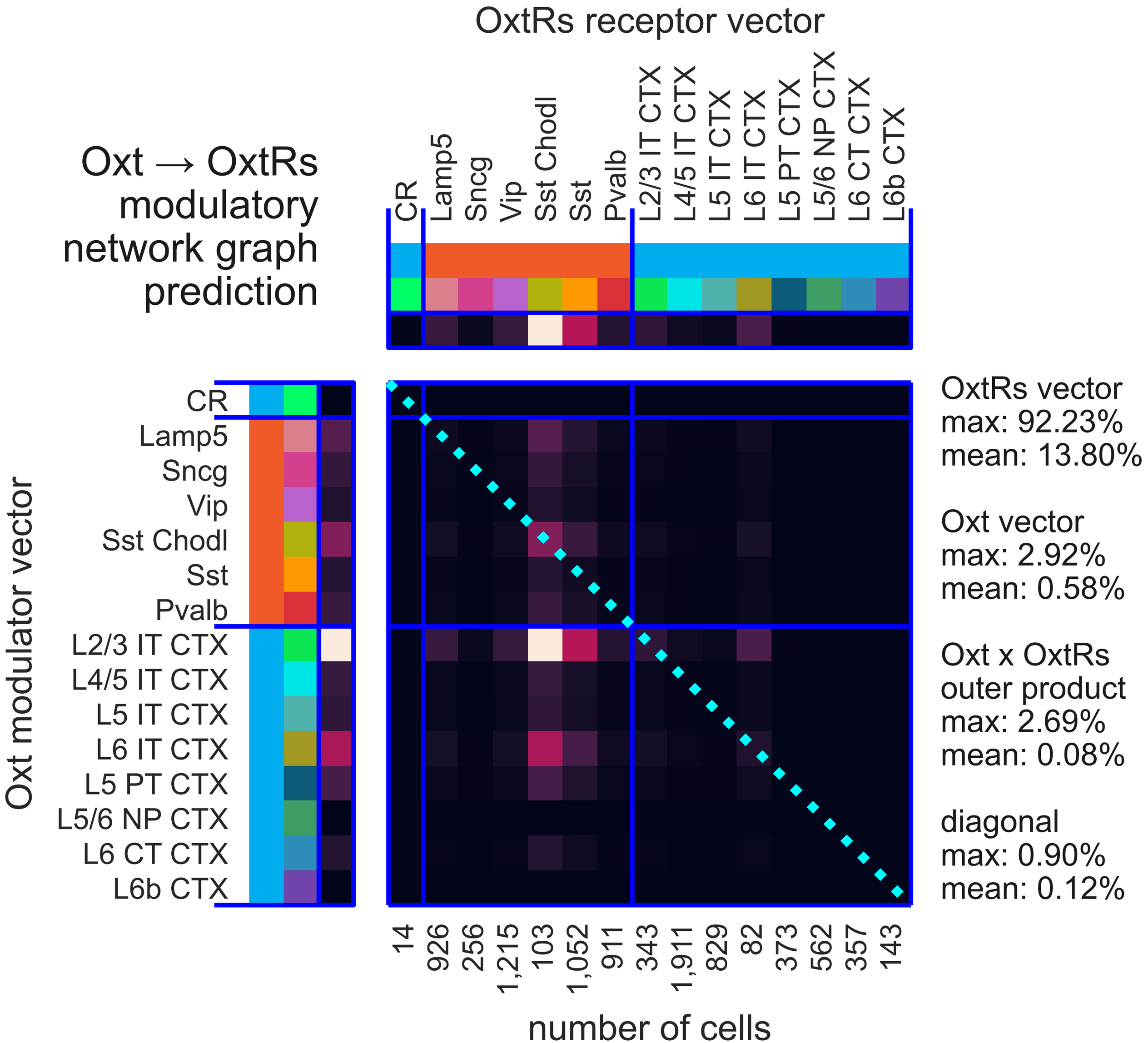
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



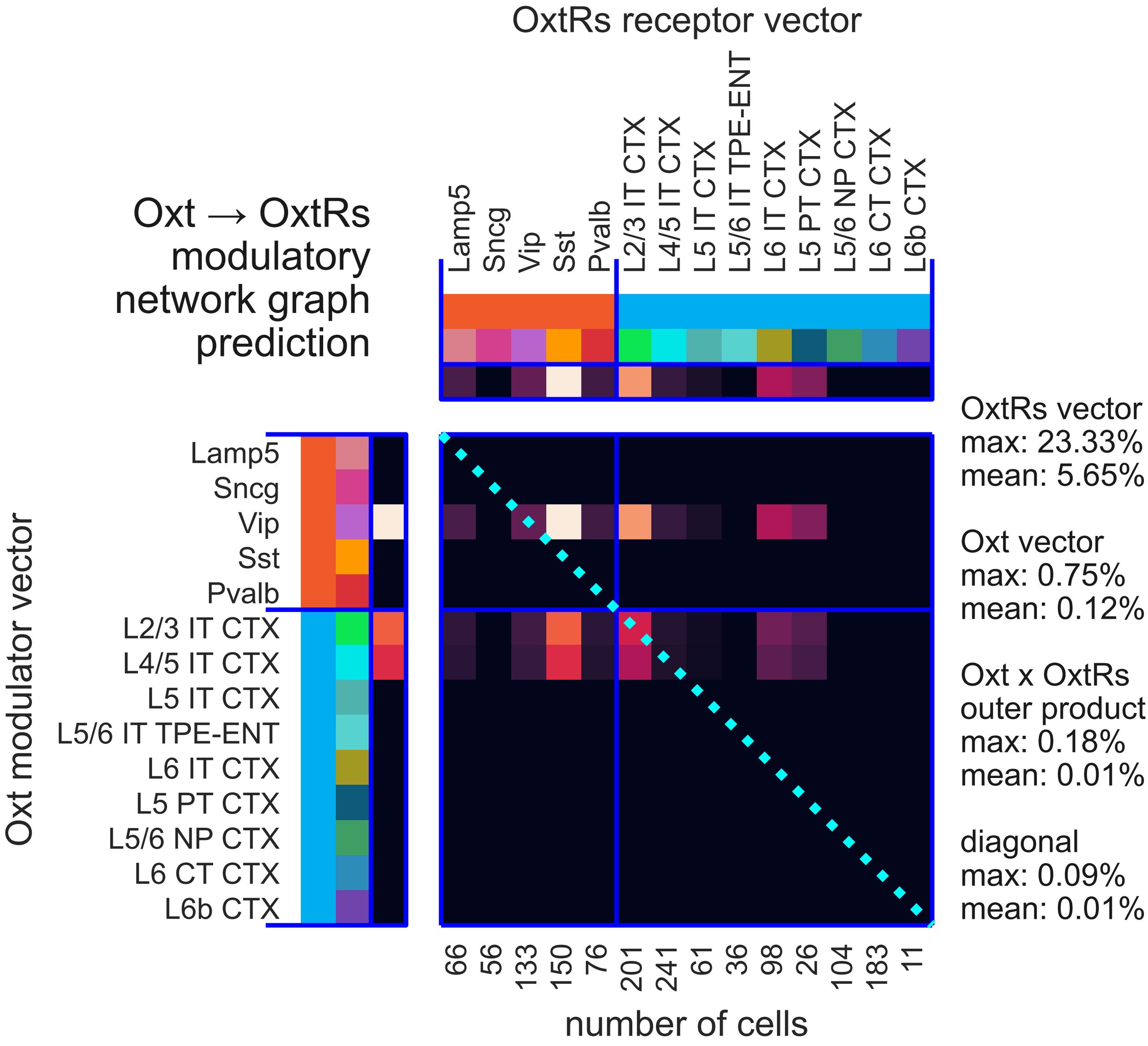

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
OxtRs receptor vector
Oxt → OxtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Oxt modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
OxtRs vector
max: 45.45%
mean: 14.29%
Oxt vector
max: 0.00%
mean: 0.00%
Oxt x OxtRs
outer product
max: 0.00%
mean: 0.00%
diagonal
max: 0.00%
mean: 0.00%

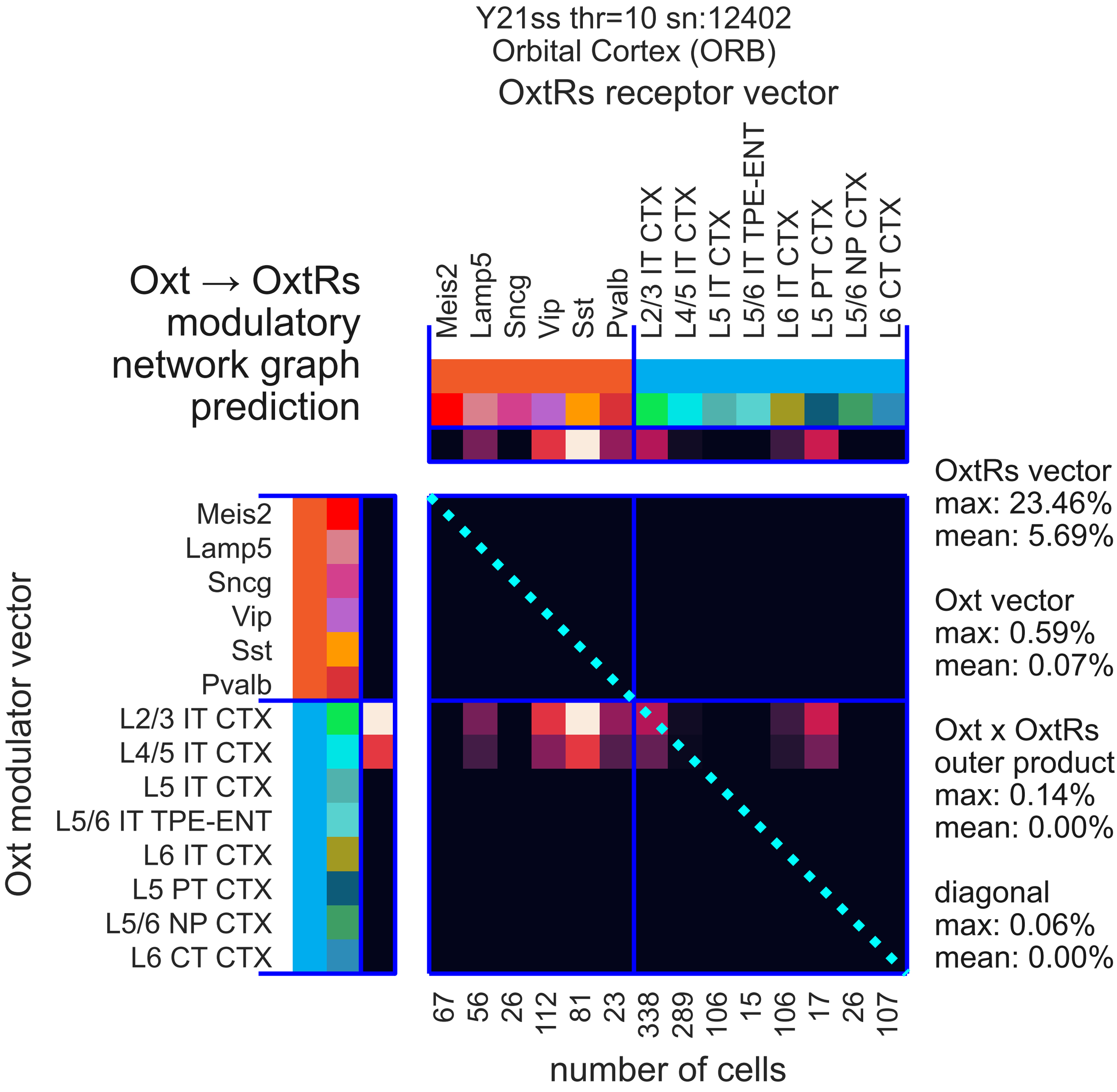

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
OxtRs receptor vector
Oxt → OxtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Oxt modulator vector
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells
OxtRs vector
max: 88.89%
mean: 11.17%
Oxt vector
max: 2.52%
mean: 0.48%
Oxt x OxtRs
outer product
max: 2.24%
mean: 0.05%
diagonal
max: 0.25%
mean: 0.03%

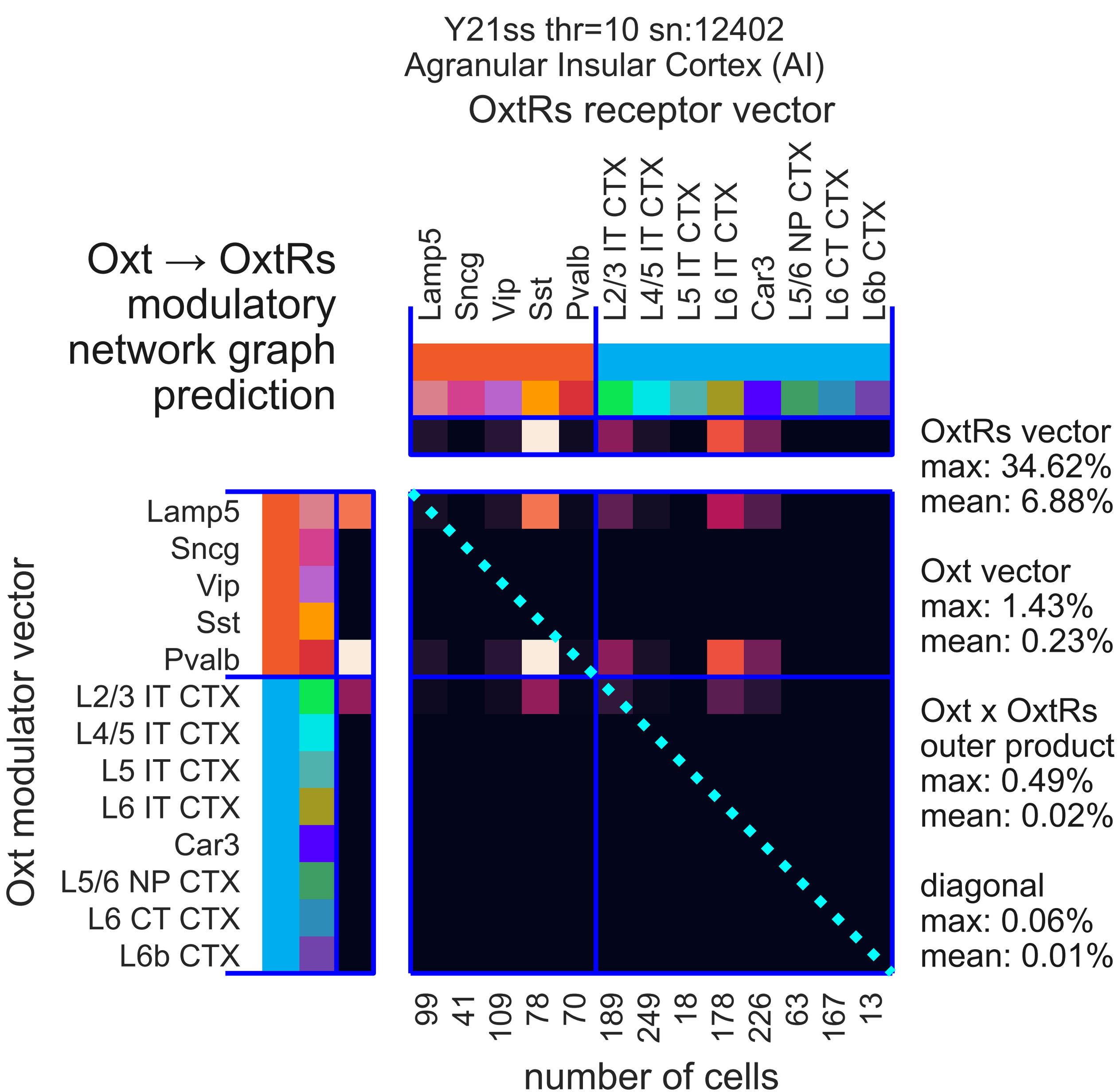
Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

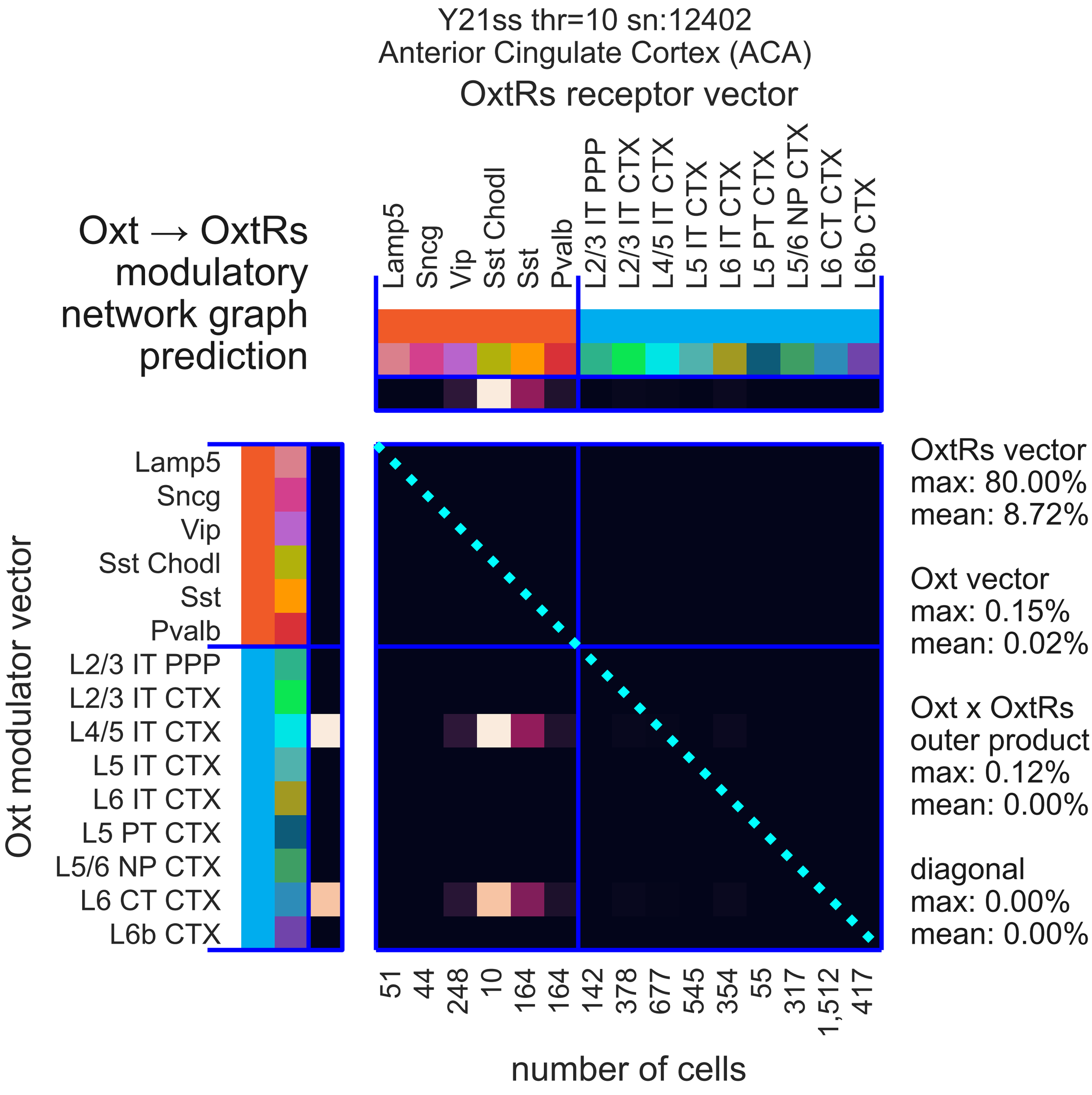


Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

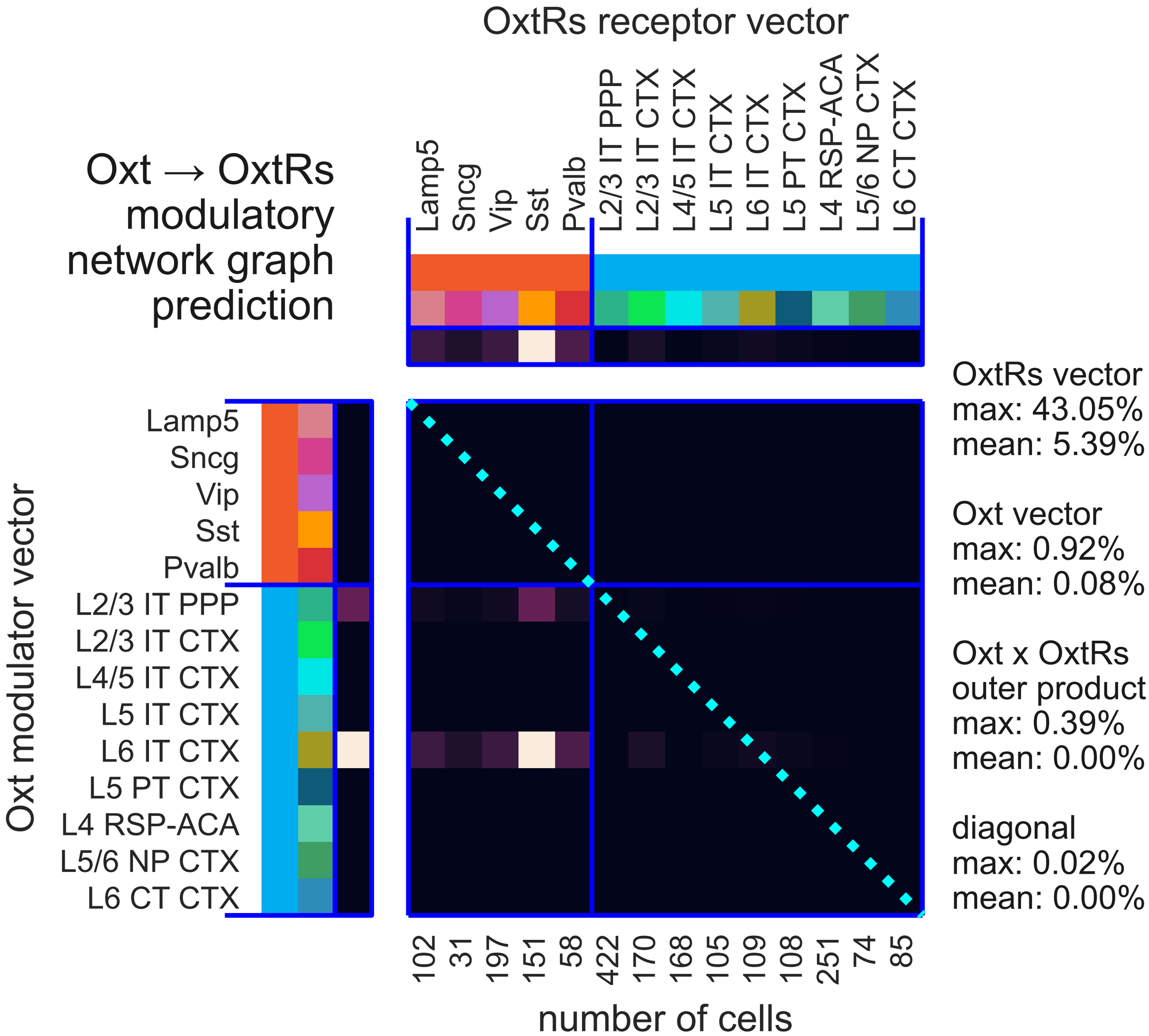


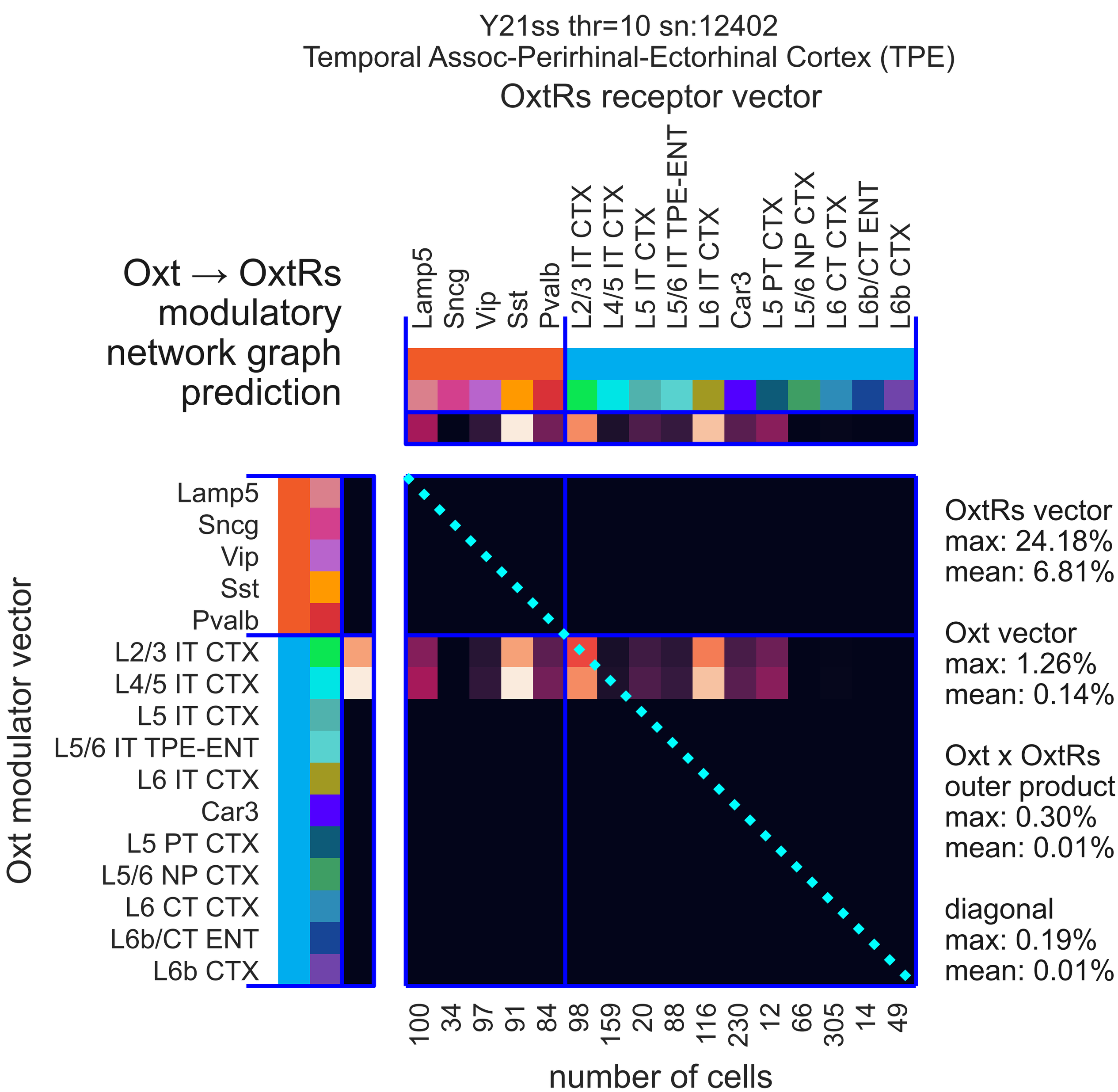

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
OxtRs receptor vector
Oxt → OxtRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Oxt modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
OxtRs vector
max: 23.46%
mean: 5.69%
Oxt vector
max: 0.59%
mean: 0.07%
Oxt x OxtRs
outer product
max: 0.14%
mean: 0.00%
diagonal
max: 0.06%
mean: 0.00%

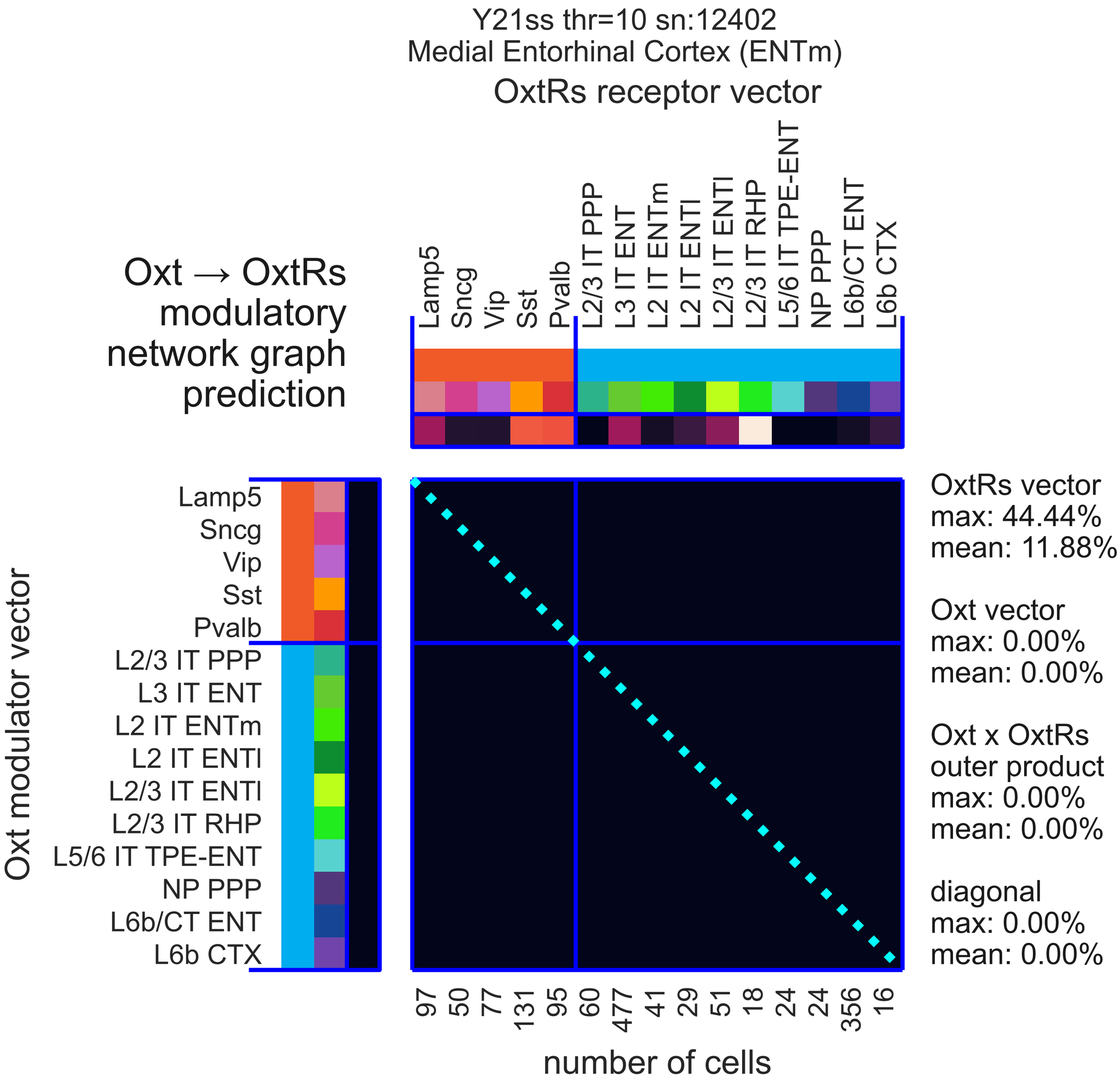

Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)
OxtRs receptor vector
Oxt → OxtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
Car3
L5/6 NP CTX
L6 CT CTX
L6b CTX
OxtRs vector
max: 34.62%
mean: 6.88%
Oxt vector
max: 1.43%
mean: 0.23%
Oxt x OxtRs
outer product
max: 0.49%
mean: 0.02%
diagonal
max: 0.06%
mean: 0.01%
Oxt modulator vector
99
41
109
78
70
189
249
18
178
226
63
167
13
number of cells


Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)
OxtRs receptor vector
Oxt → OxtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Oxt modulator vector
51
44
248
10
164
164
142
378
677
545
354
55
317
1,512
417
number of cells
OxtRs vector
max: 80.00%
mean: 8.72%
Oxt vector
max: 0.15%
mean: 0.02%
Oxt x OxtRs
outer product
max: 0.12%
mean: 0.00%
diagonal
max: 0.00%
mean: 0.00%

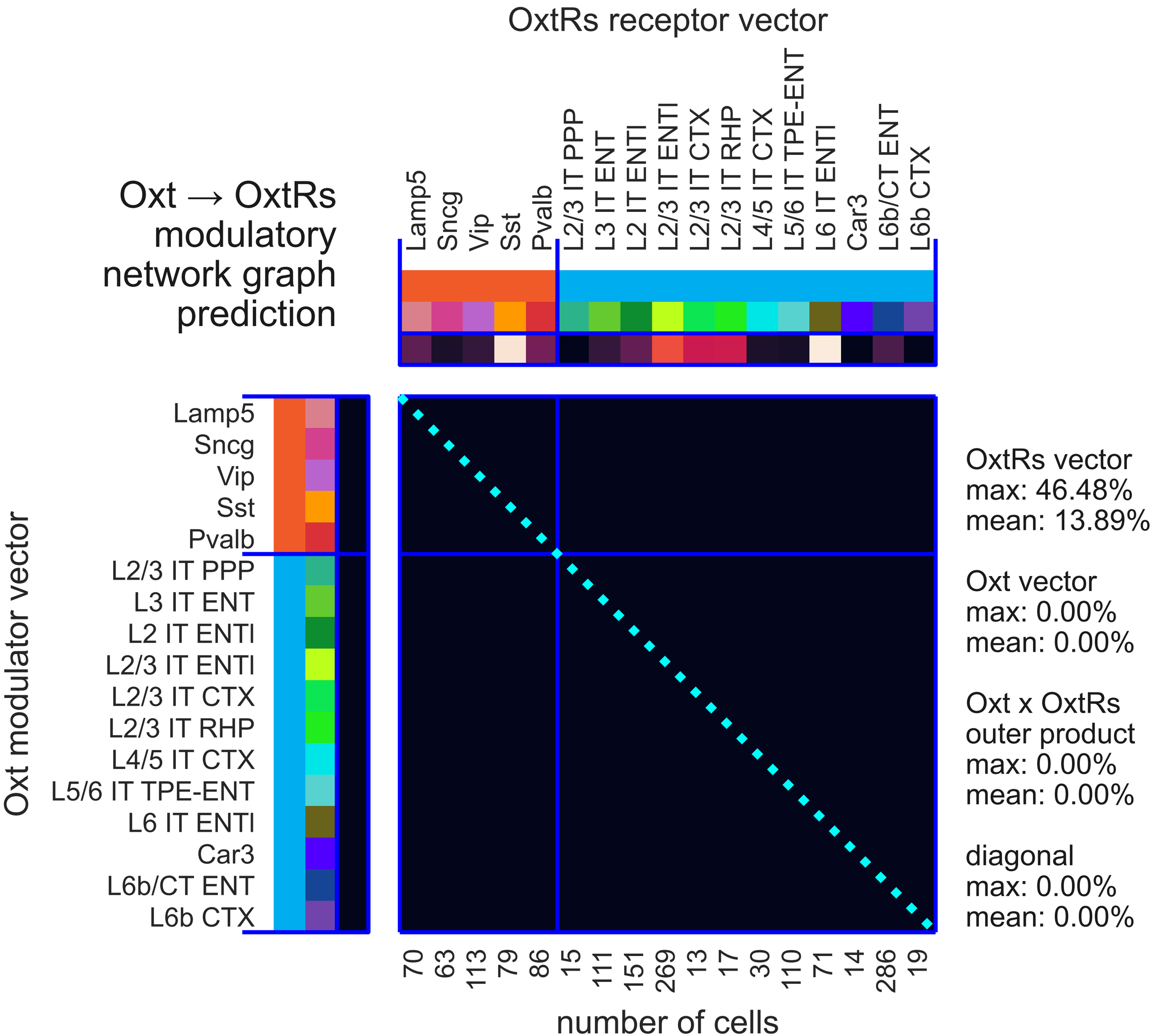
Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)



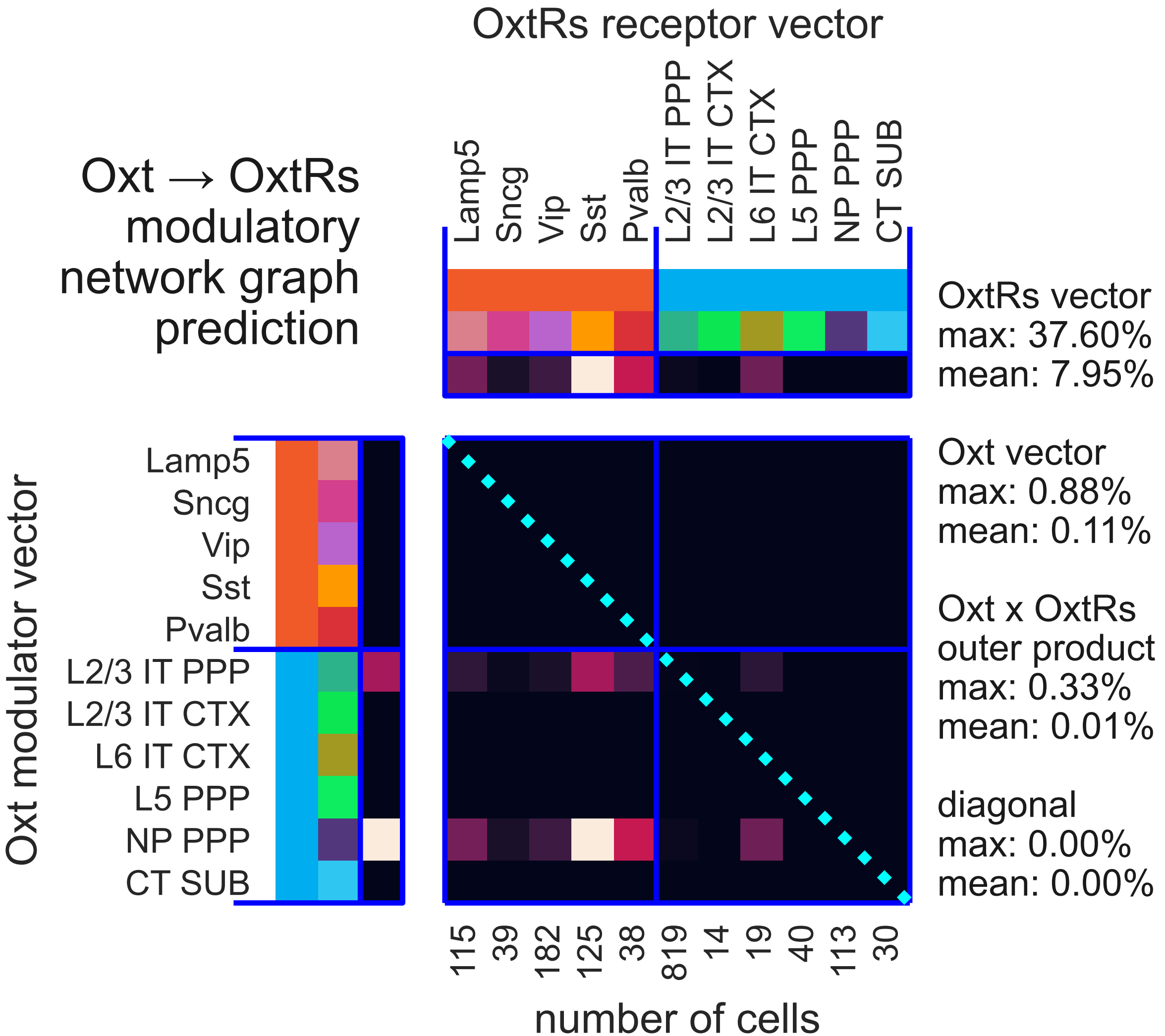

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)
OxtRs receptor vector
Oxt → OxtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b/CT ENT
L6b CTX
Oxt modulator vector
100
34
97
91
84
98
159
20
88
116
230
12
66
305
14
49
number of cells
OxtRs vector
max: 24.18%
mean: 6.81%
Oxt vector
max: 1.26%
mean: 0.14%
Oxt x OxtRs
outer product
max: 0.30%
mean: 0.01%
diagonal
max: 0.19%
mean: 0.01%

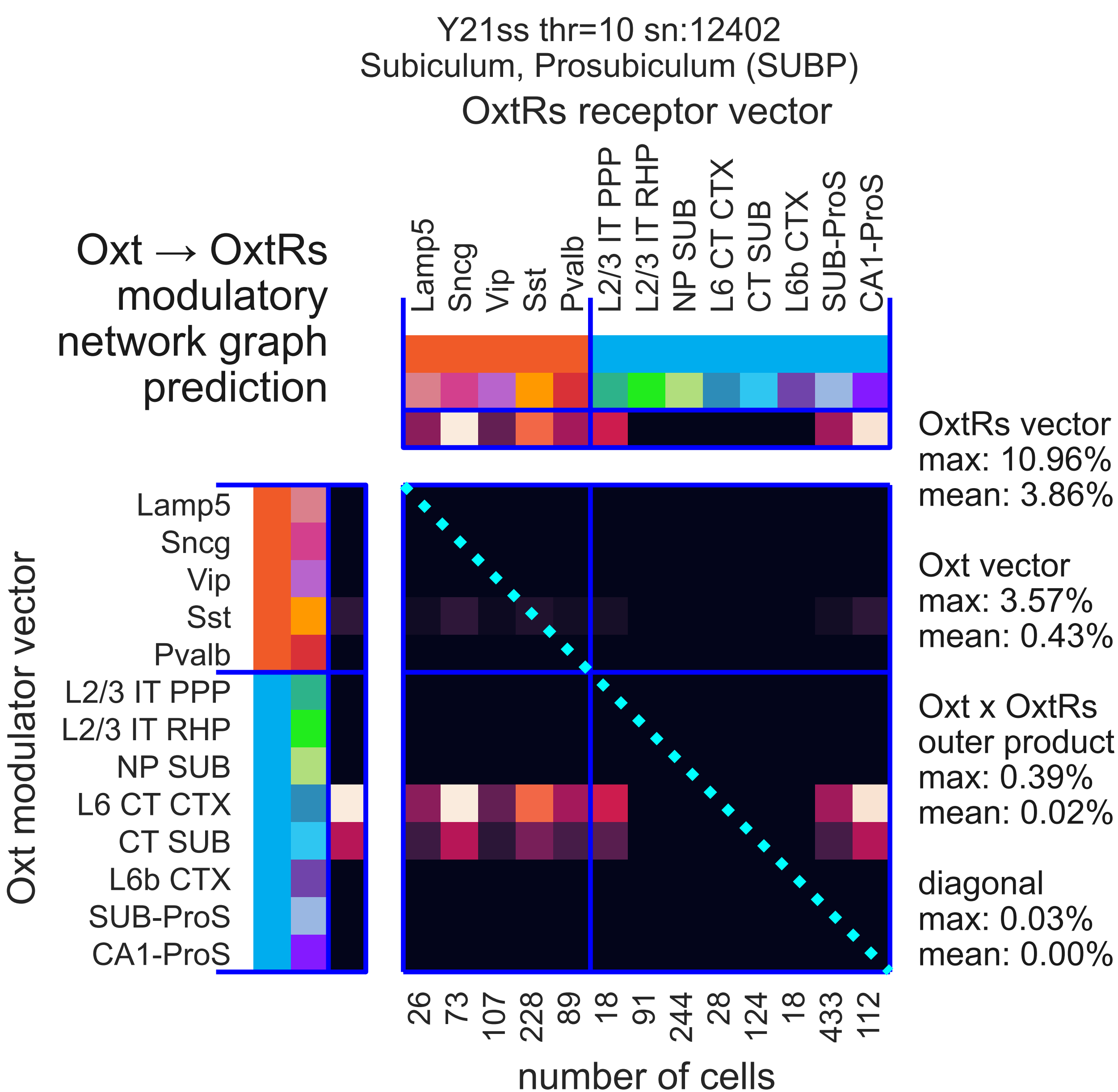

Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
OxtRs receptor vector
Oxt → OxtRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Oxt modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
OxtRs vector
max: 44.44%
mean: 11.88%
Oxt vector
max: 0.00%
mean: 0.00%
Oxt x OxtRs
outer product
max: 0.00%
mean: 0.00%
diagonal
max: 0.00%
mean: 0.00%

Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)



Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

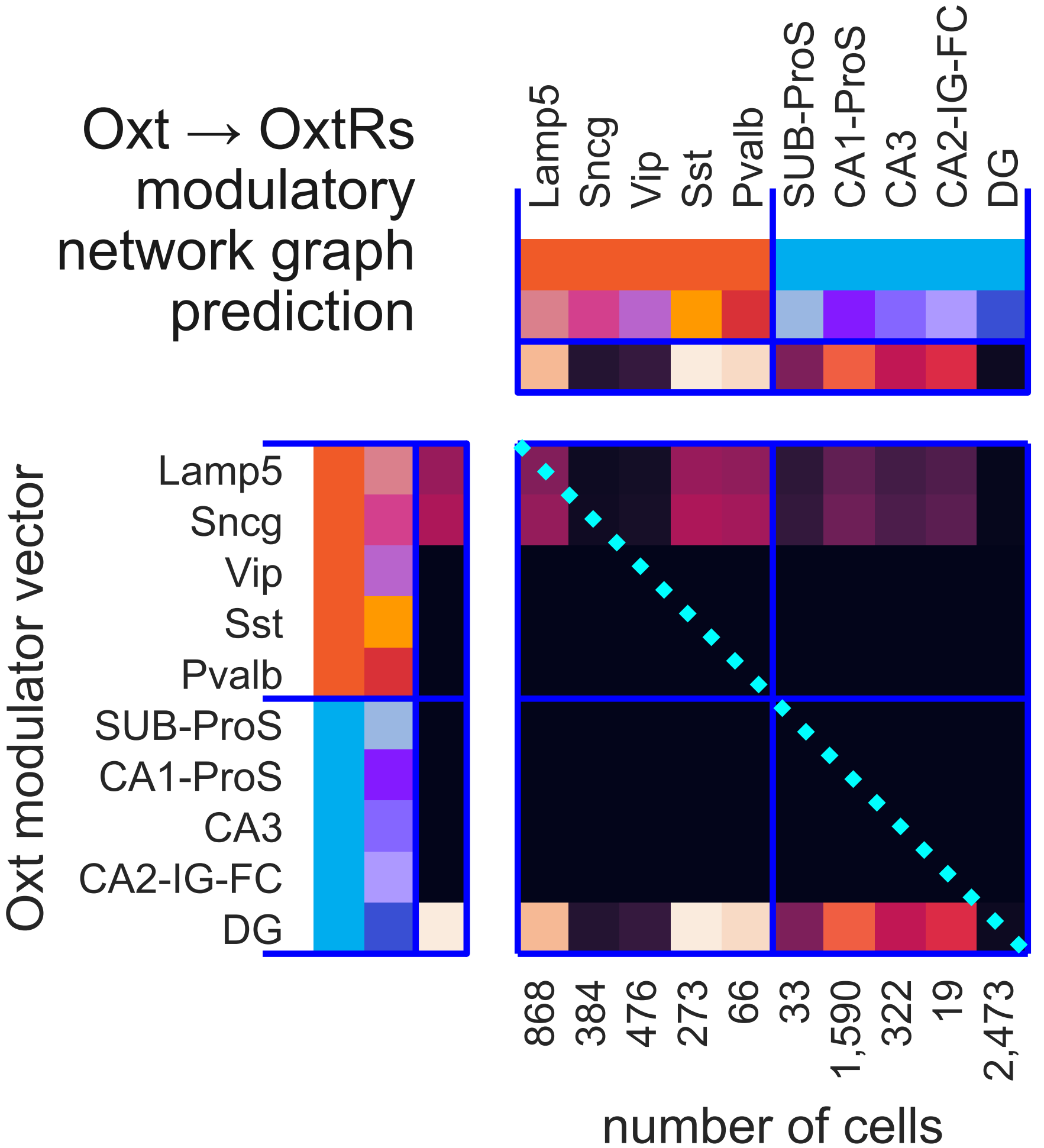



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)
OxtRs receptor vector
Oxt → OxtRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT RHP
NP SUB
L6 CT CTX
CT SUB
L6b CTX
SUB-ProS
CA1-ProS
OxtRs vector
max: 10.96%
mean: 3.86%
Oxt vector
max: 3.57%
mean: 0.43%
Oxt x OxtRs
outer product
max: 0.39%
mean: 0.02%
diagonal
max: 0.03%
mean: 0.00%
Oxt modulator vector
26
73
107
228
89
18
91
244
28
124
18
433
112
number of cells

Y21ss thr=10 sn:12402
Hippocampus (HIP)

OxtRs receptor vector

Oxt → OxtRs modulatory network graph prediction



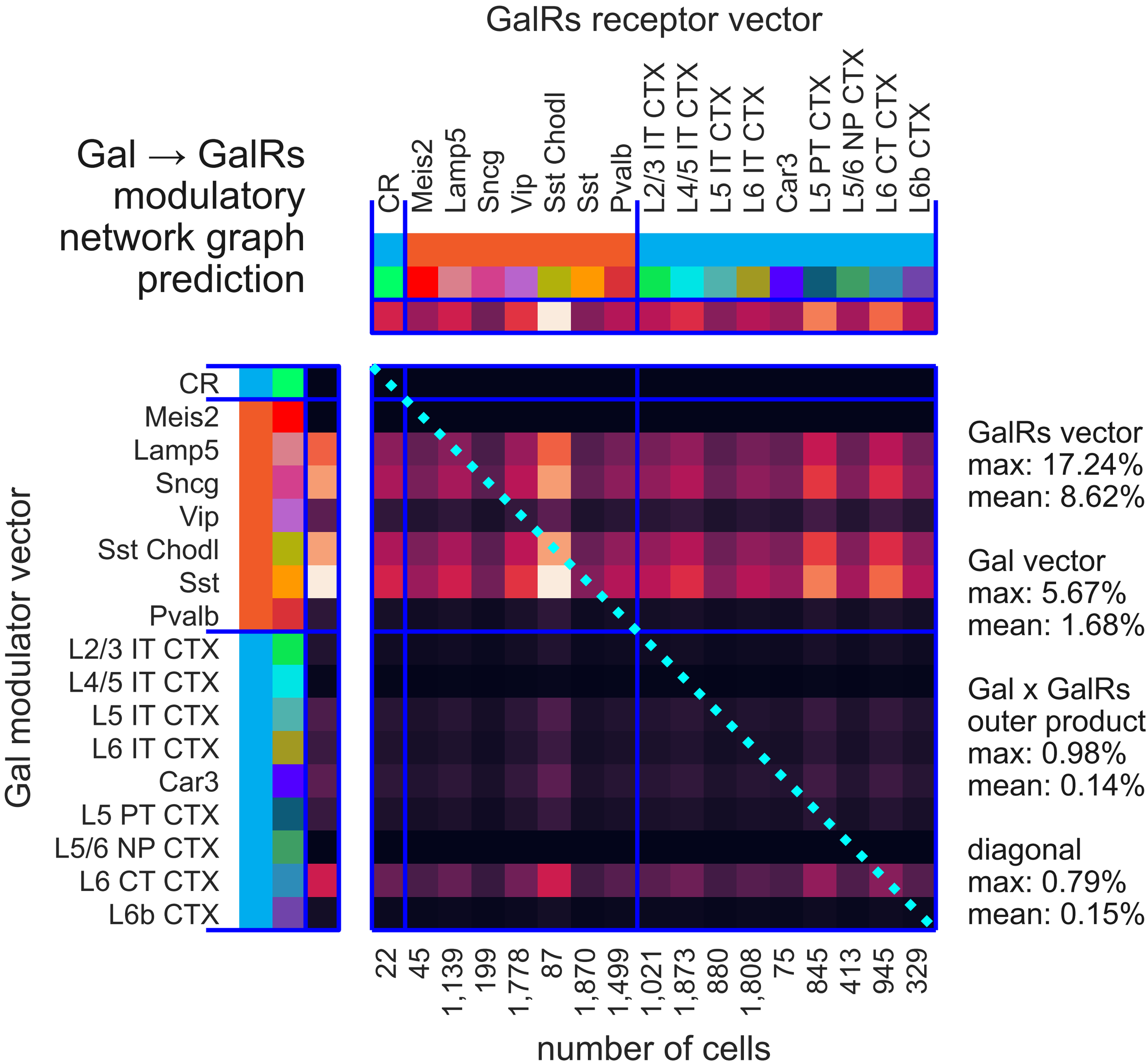
OxtRs vector
max: 19.05%
mean: 9.72%

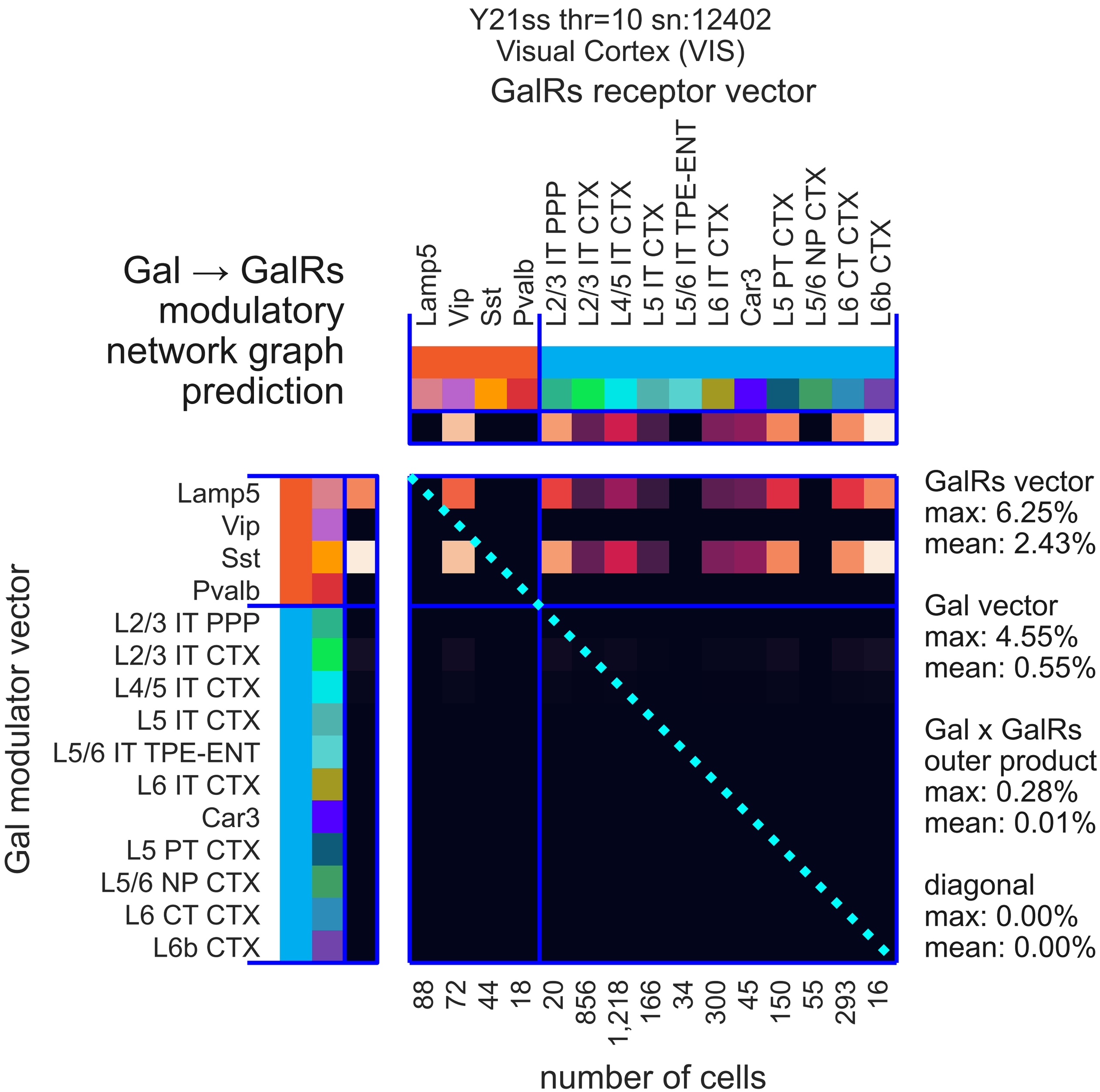
Oxt vector
max: 0.61%
mean: 0.11%

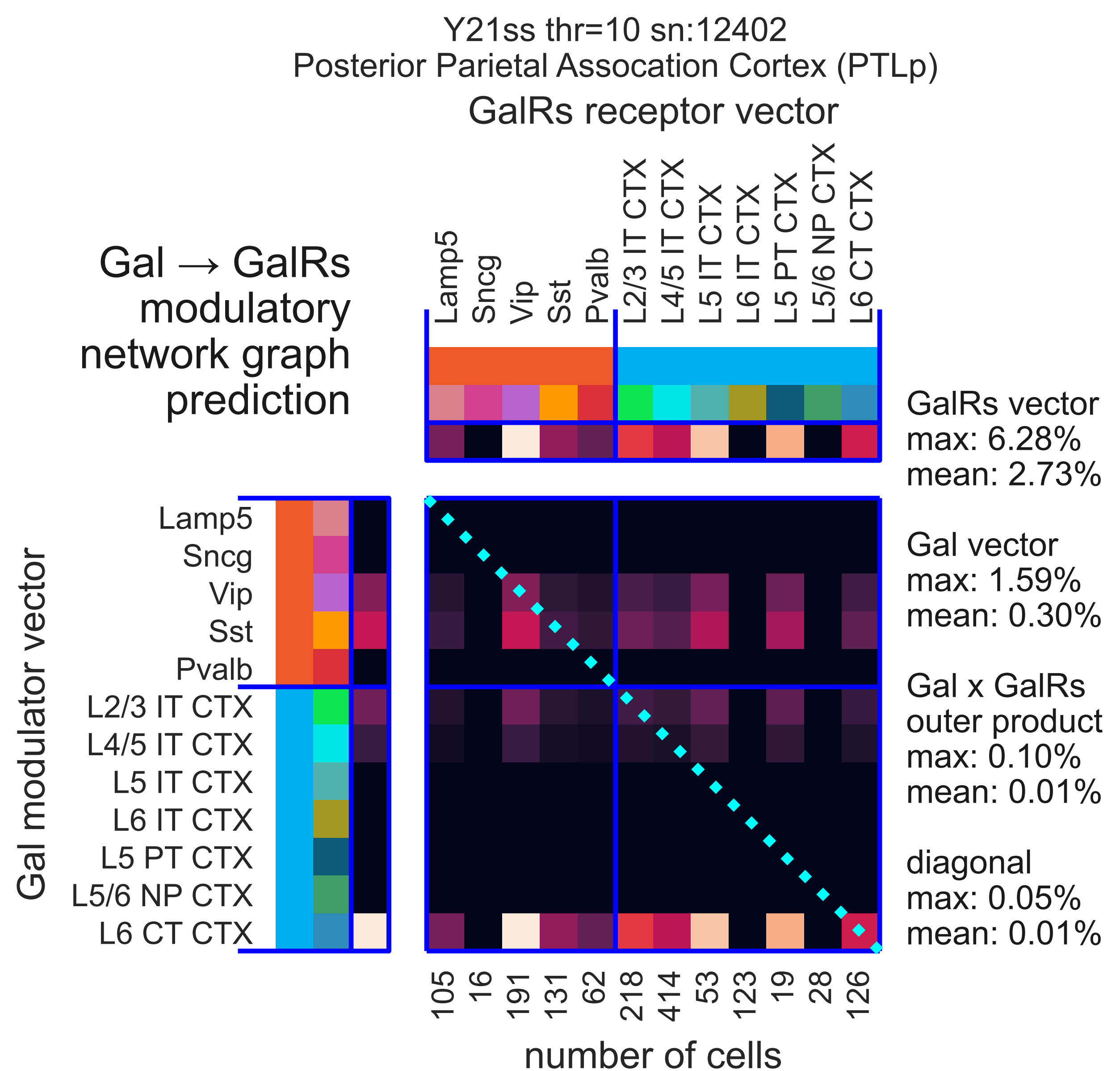
Oxt x OxtRs
outer product
max: 0.12%
mean: 0.01%

diagonal
max: 0.04%
mean: 0.00%

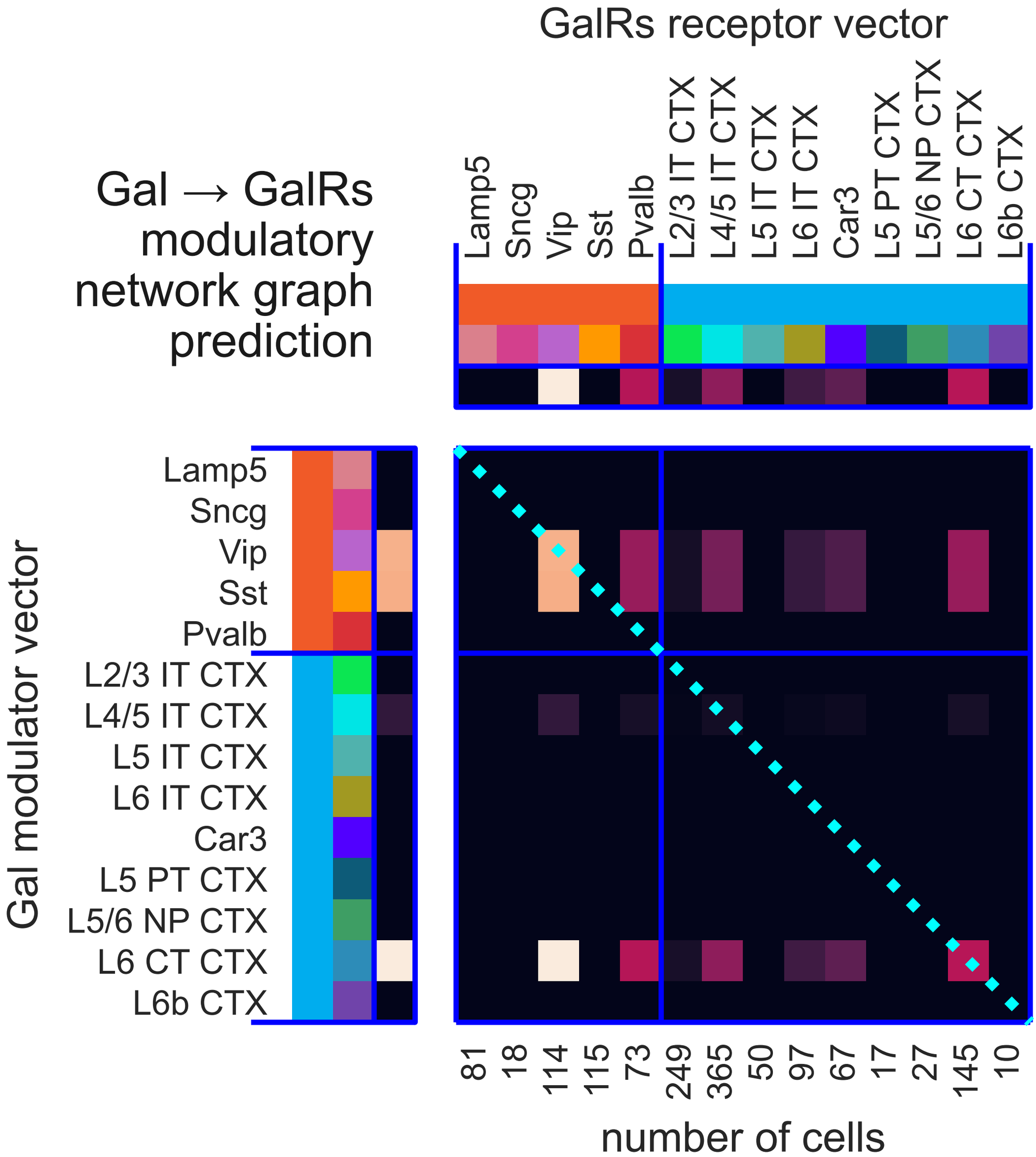
Y21ss thr=10 sn:12402
Primary Visual Cortex (VISp)




Y21ss thr=10 sn:12402
Visual Cortex (VIS)
GalRs receptor vector
Gal → GalRs
modulatory
network graph
prediction
Lamp5
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Gal modulator vector
88
72
44
18
20
856
1,218
166
34
300
45
150
55
293
16
number of cells
GalRs vector
max: 6.25%
mean: 2.43%
Gal vector
max: 4.55%
mean: 0.55%
Gal x GalRs
outer product
max: 0.28%
mean: 0.01%
diagonal
max: 0.00%
mean: 0.00%


Y21ss thr=10 sn:12402
Posterior Parietal Assocation Cortex (PTLp)
GalRs receptor vector
Gal → GalRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
GalRs vector
max: 6.28%
mean: 2.73%
Gal vector
max: 1.59%
mean: 0.30%
Gal x GalRs
outer product
max: 0.10%
mean: 0.01%
diagonal
max: 0.05%
mean: 0.01%
Gal modulator vector
105
16
191
131
62
218
414
53
123
19
28
126
number of cells

Y21ss thr=10 sn:12402
Auditory Cortex (AUD)



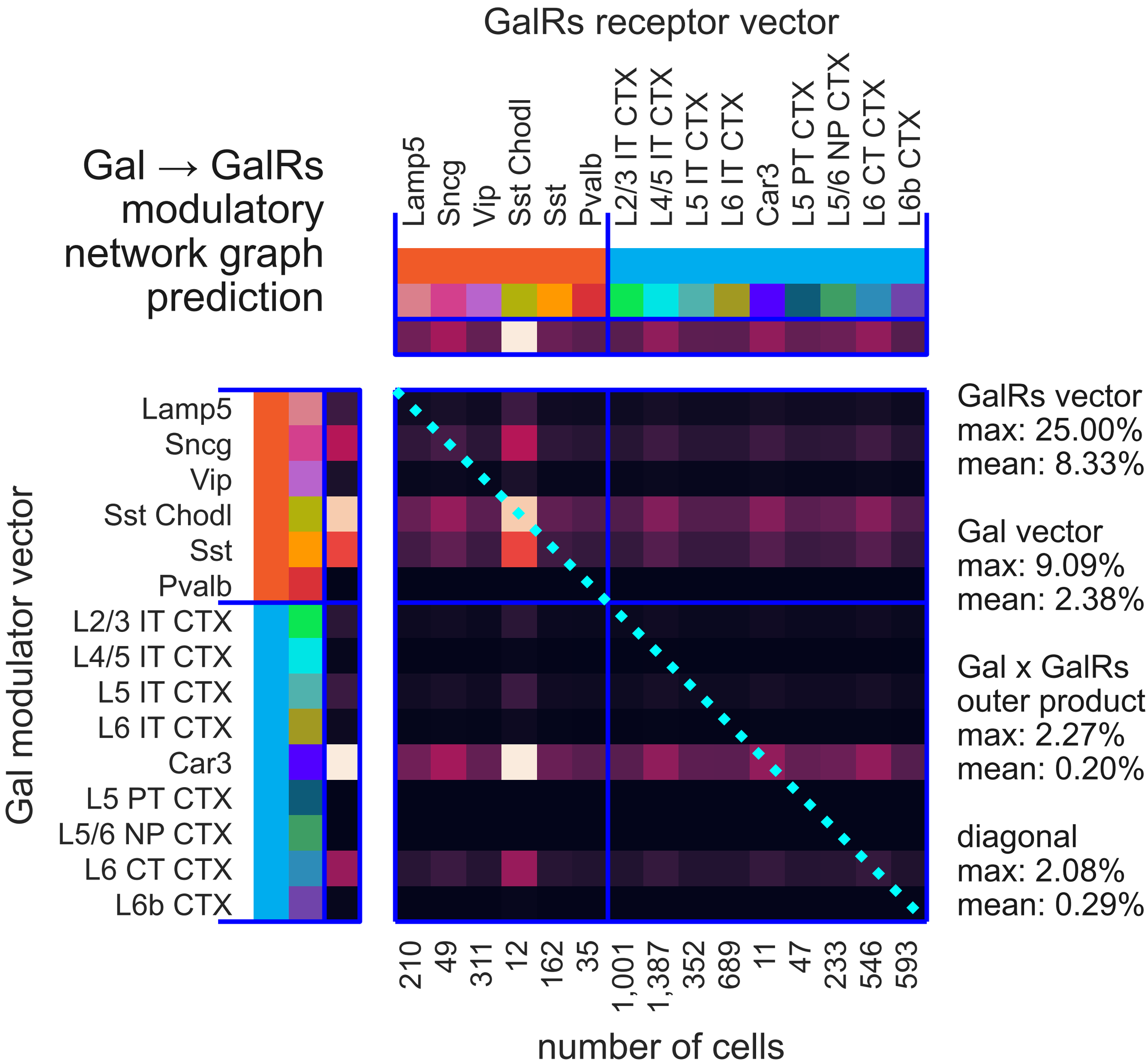
GalRs vector
max: 6.14%
mean: 1.20%

Gal vector
max: 2.07%
mean: 0.42%

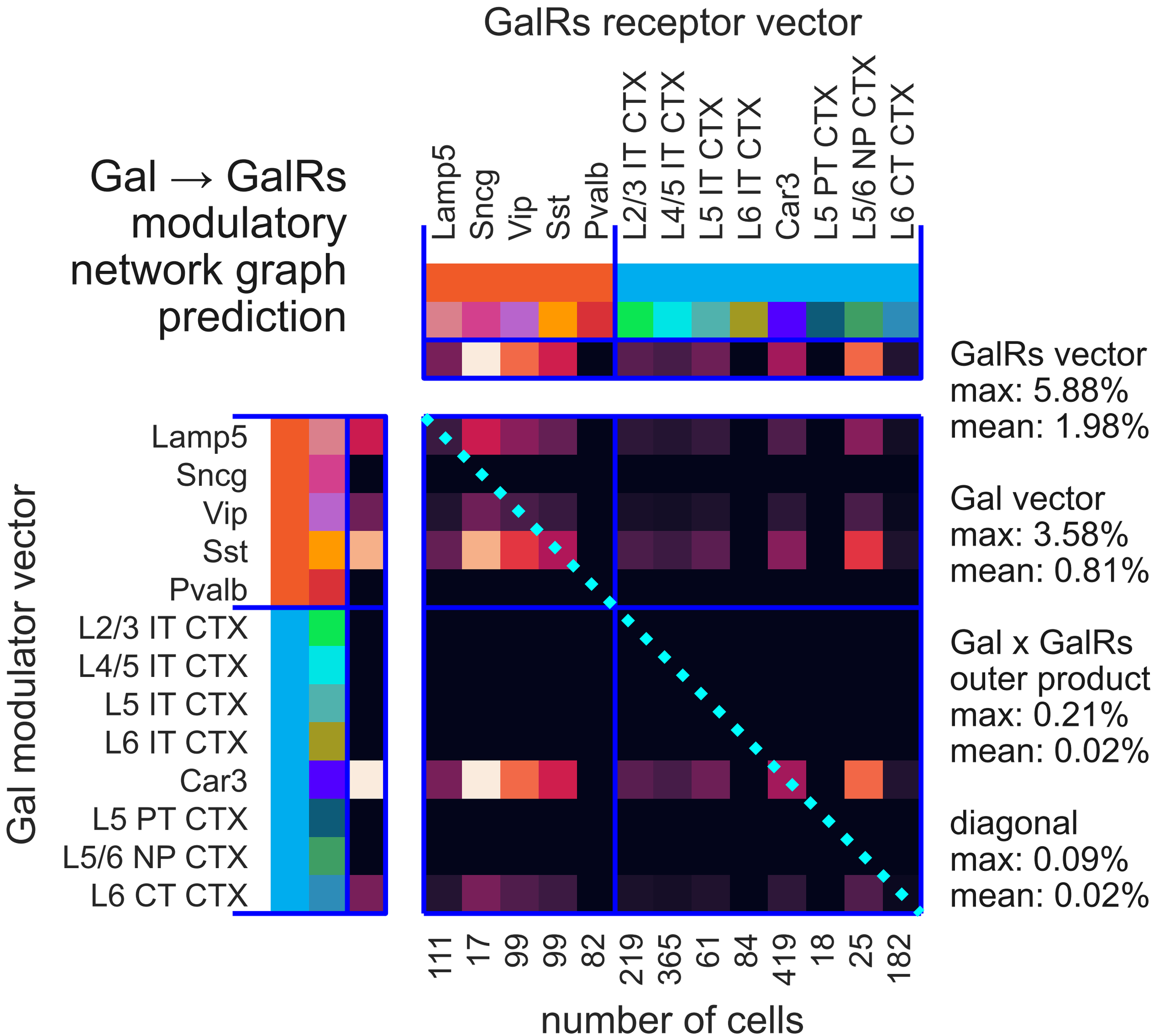
Gal x GalRs
outer product
max: 0.13%
mean: 0.00%

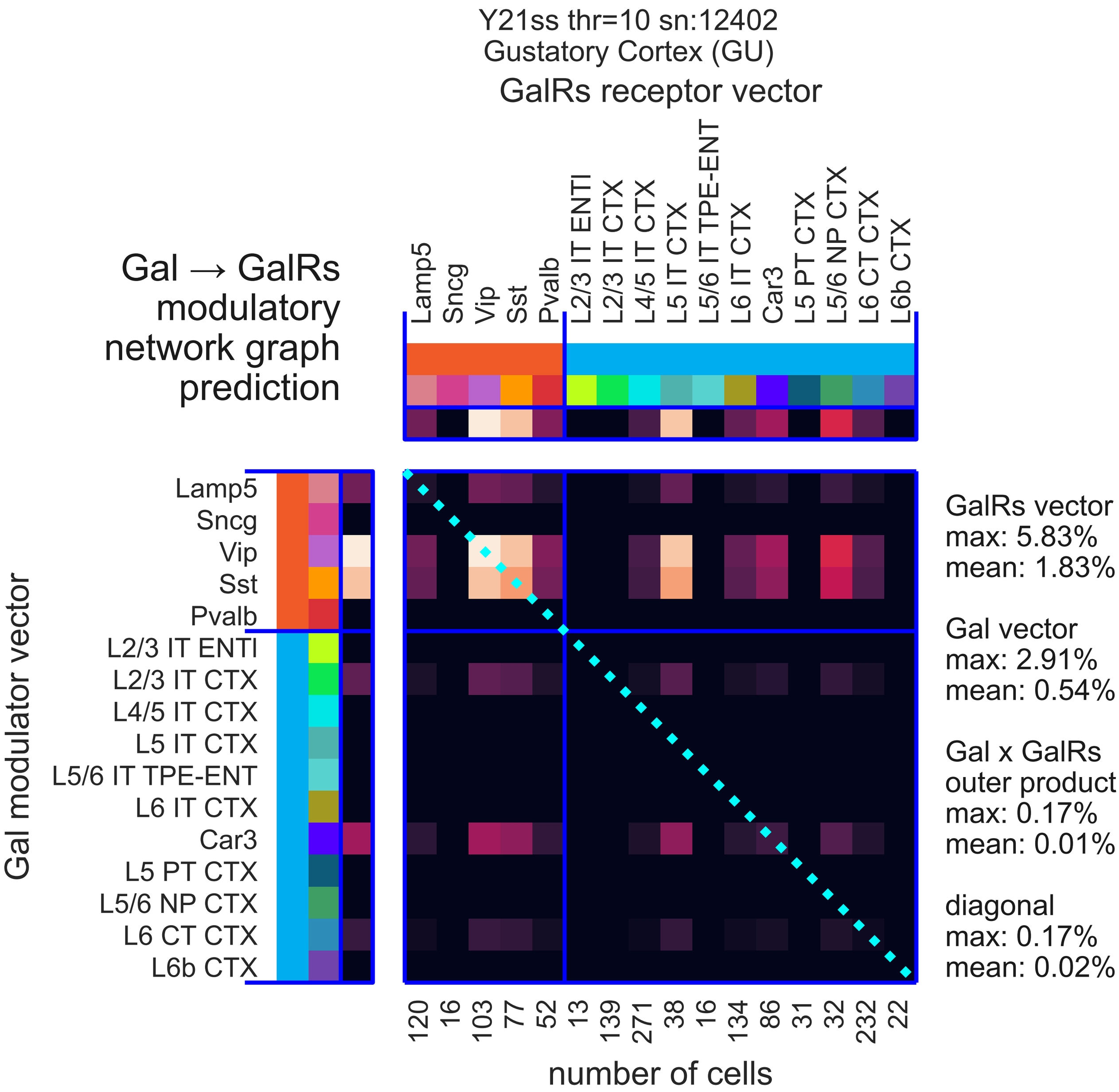
diagonal
max: 0.11%
mean: 0.01%

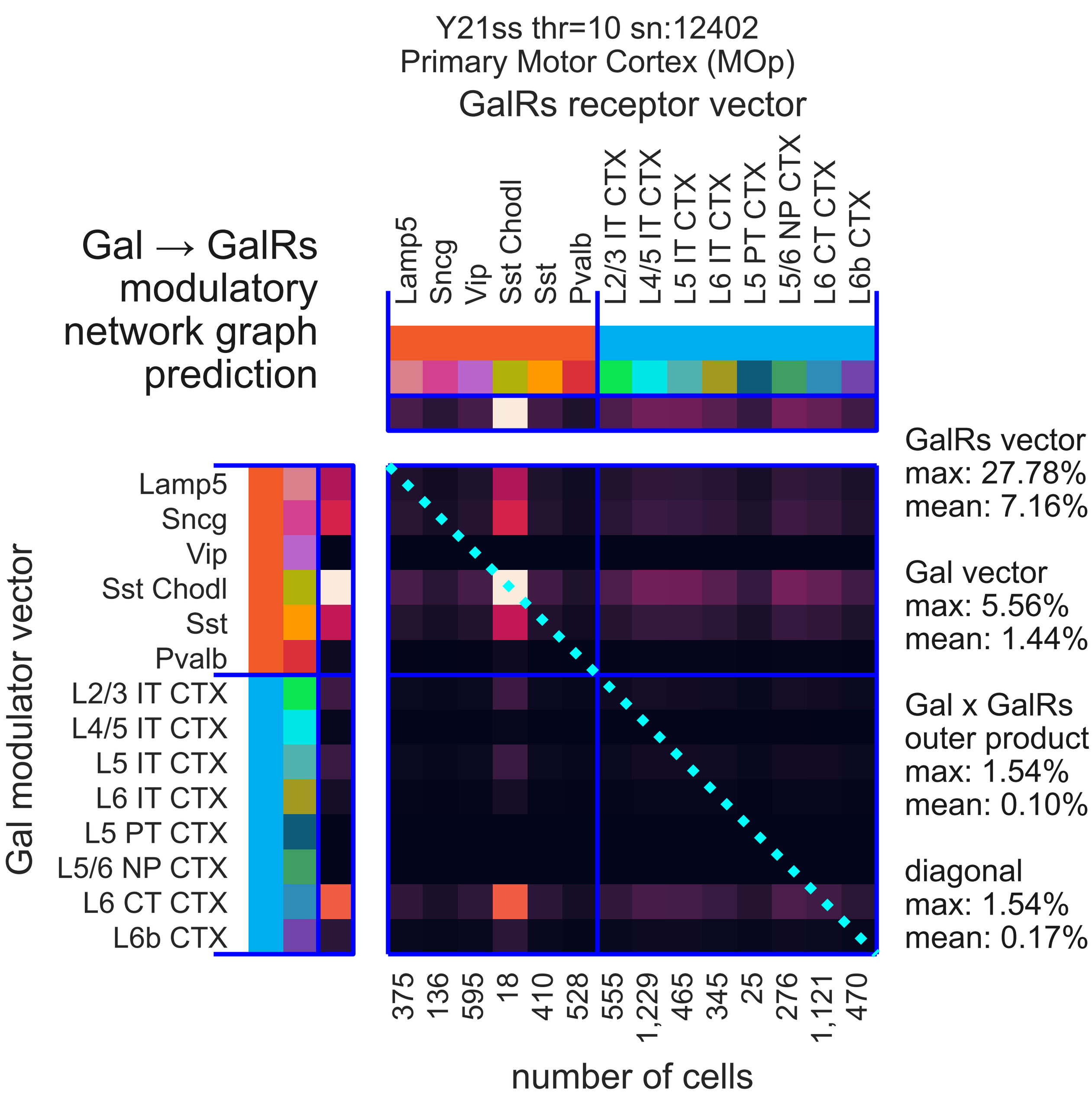
Y21ss thr=10 sn:12402
Primary Somatosensory Cortex (SSp)



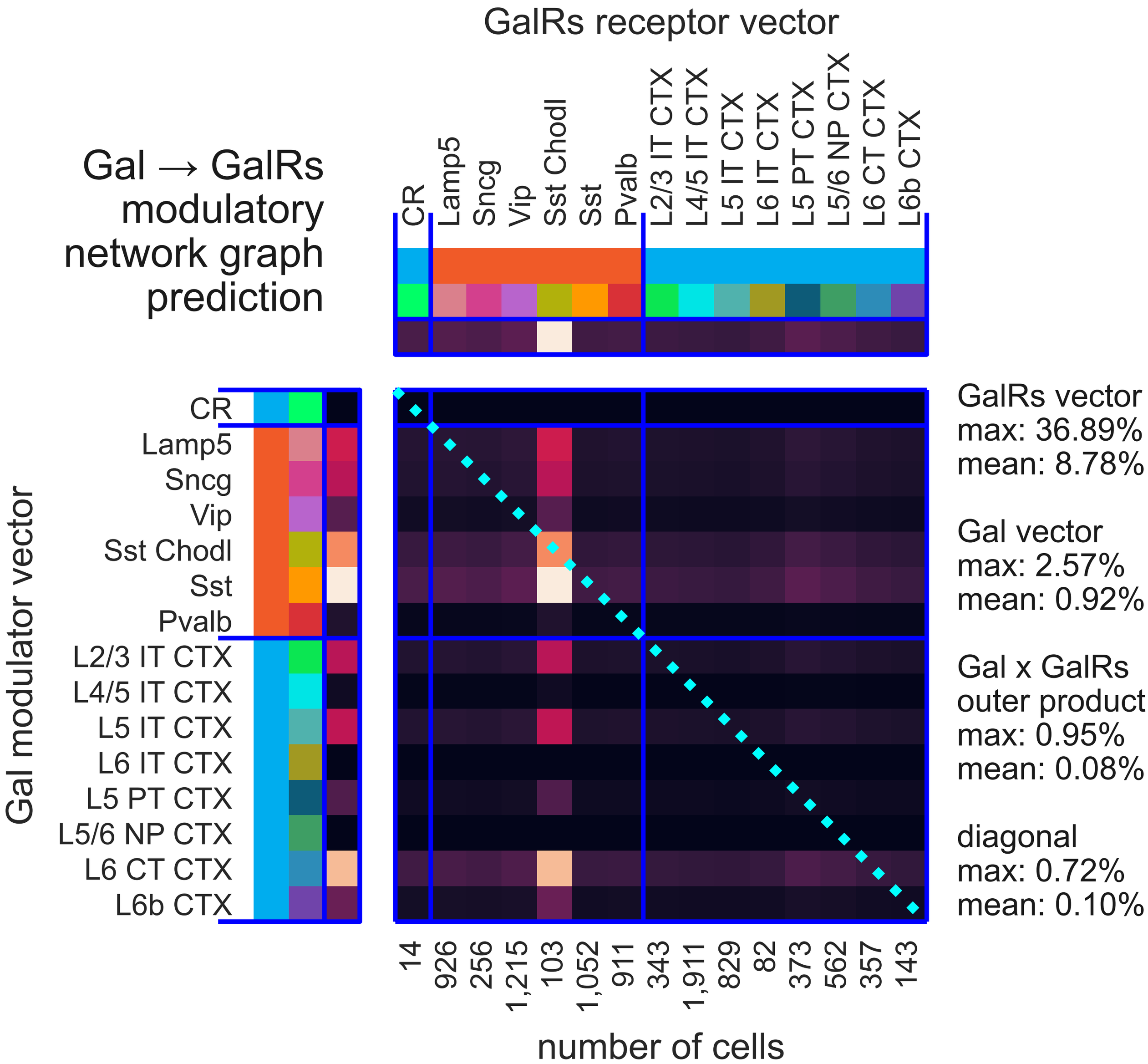
Y21ss thr=10 sn:12402
Secondary Somatosensory Cortex (SSs)



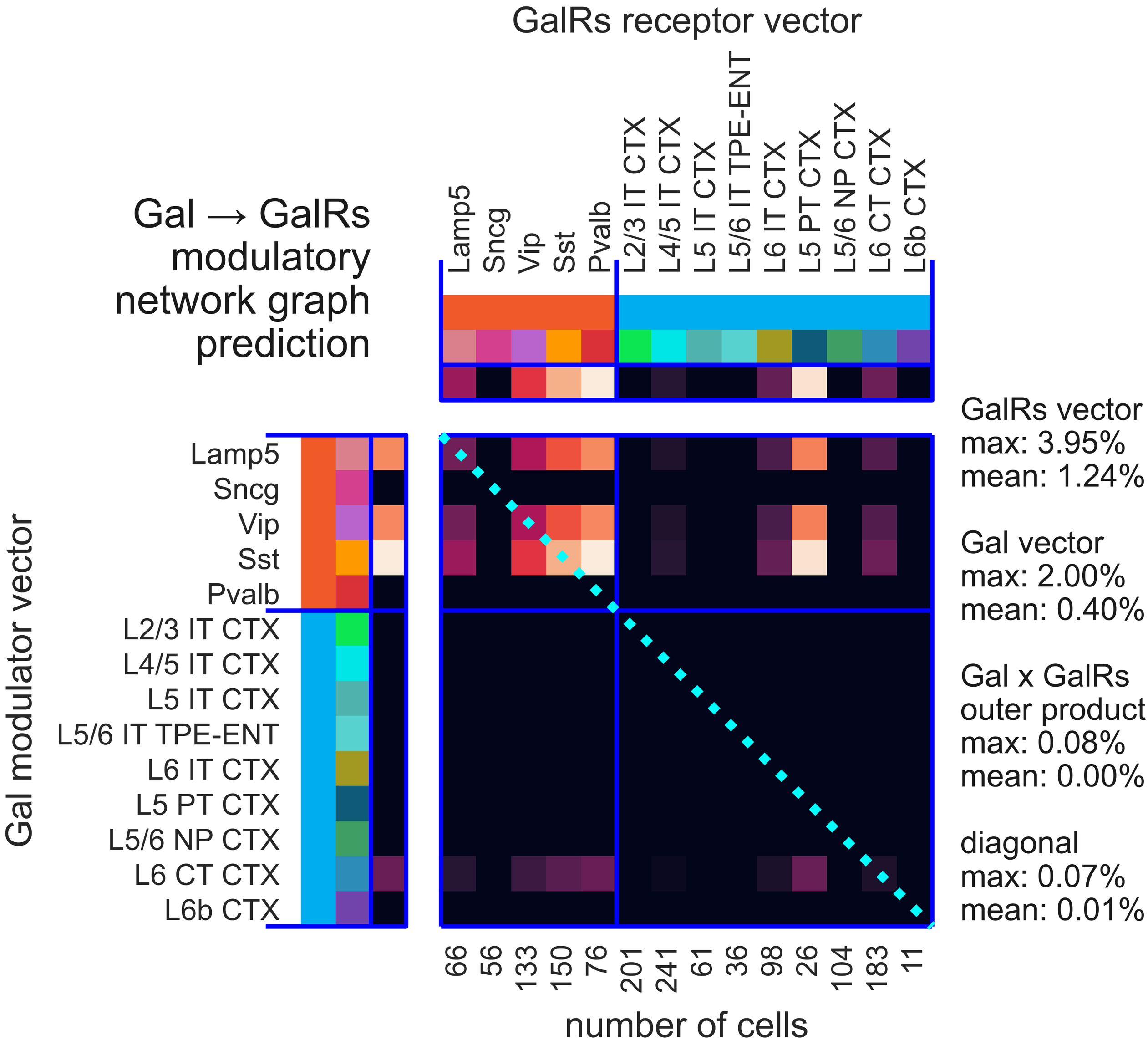

Y21ss thr=10 sn:12402
Gustatory Cortex (GU)
GalRs receptor vector
Gal → GalRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT ENTI
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Gal modulator vector
120
16
103
77
52
13
139
271
38
16
134
86
31
32
232
22
number of cells
GalRs vector
max: 5.83%
mean: 1.83%
Gal vector
max: 2.91%
mean: 0.54%
Gal x GalRs
outer product
max: 0.17%
mean: 0.01%
diagonal
max: 0.17%
mean: 0.02%

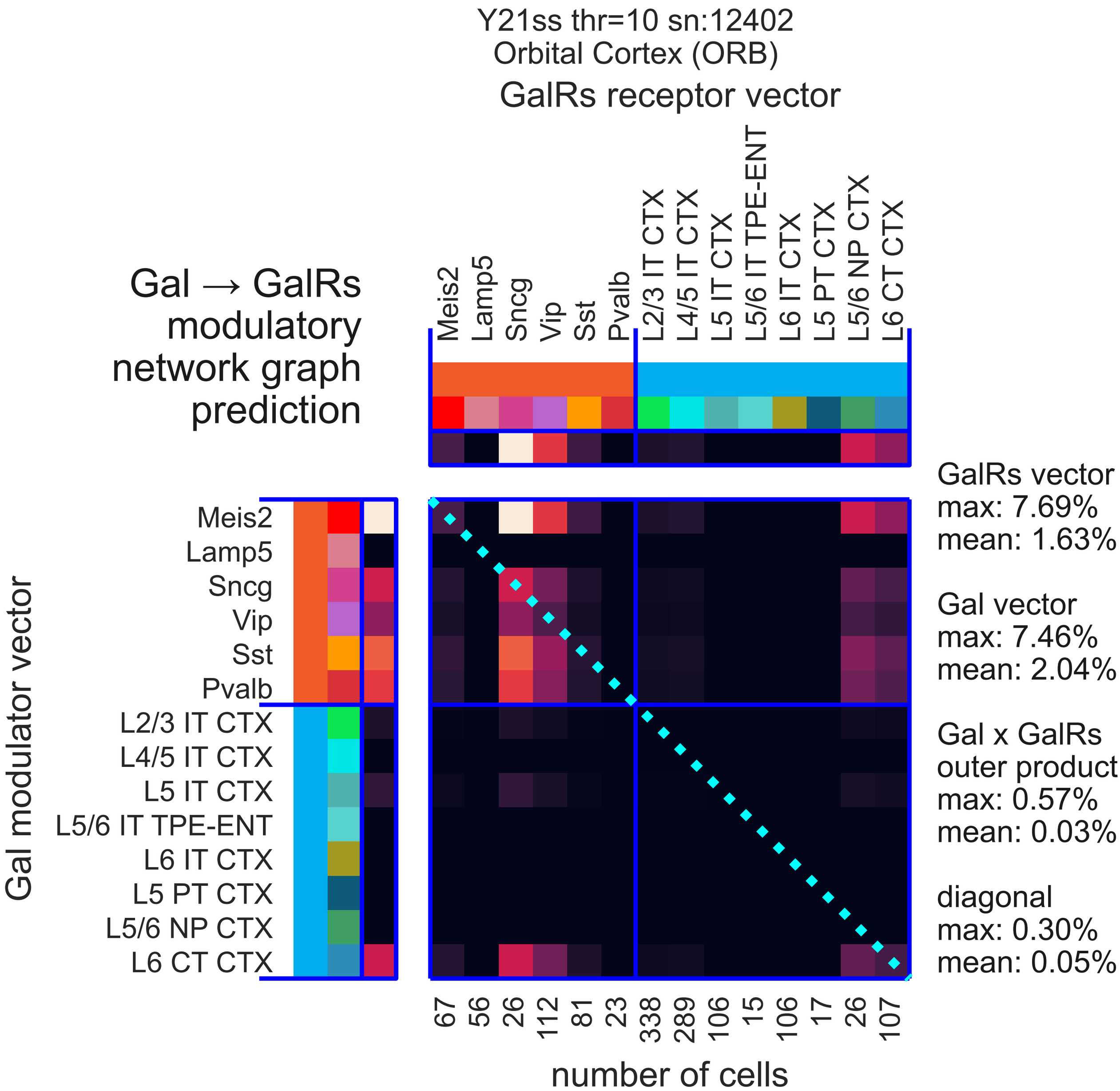

Y21ss thr=10 sn:12402
Primary Motor Cortex (MOp)
GalRs receptor vector
Gal → GalRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Gal modulator vector
375
136
595
18
410
528
555
1,229
465
345
25
276
1,121
470
number of cells
GalRs vector
max: 27.78%
mean: 7.16%
Gal vector
max: 5.56%
mean: 1.44%
Gal x GalRs
outer product
max: 1.54%
mean: 0.10%
diagonal
max: 1.54%
mean: 0.17%

Y21ss thr=10 sn:12402
Anterolateral Motor Cortex (ALM)

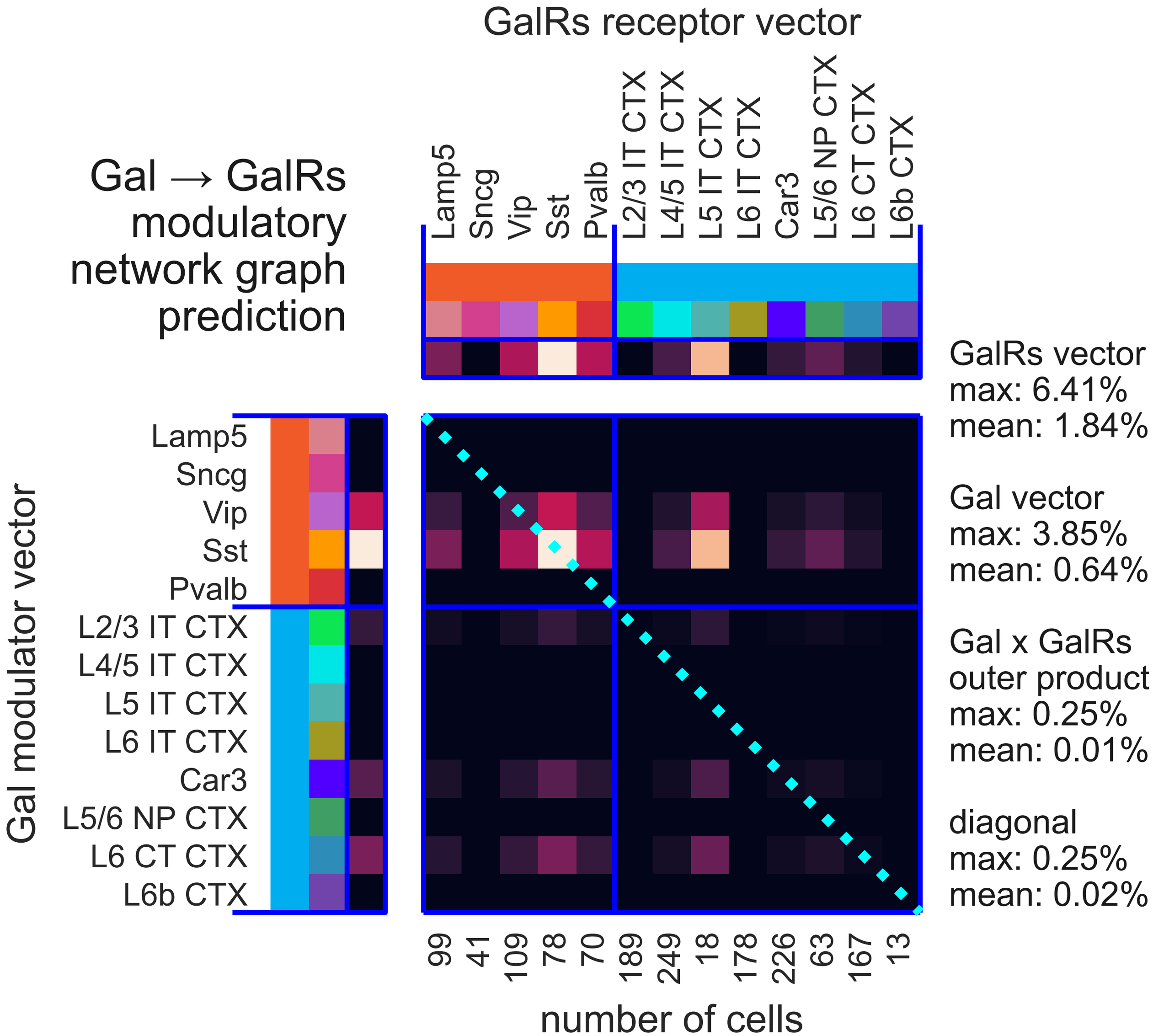


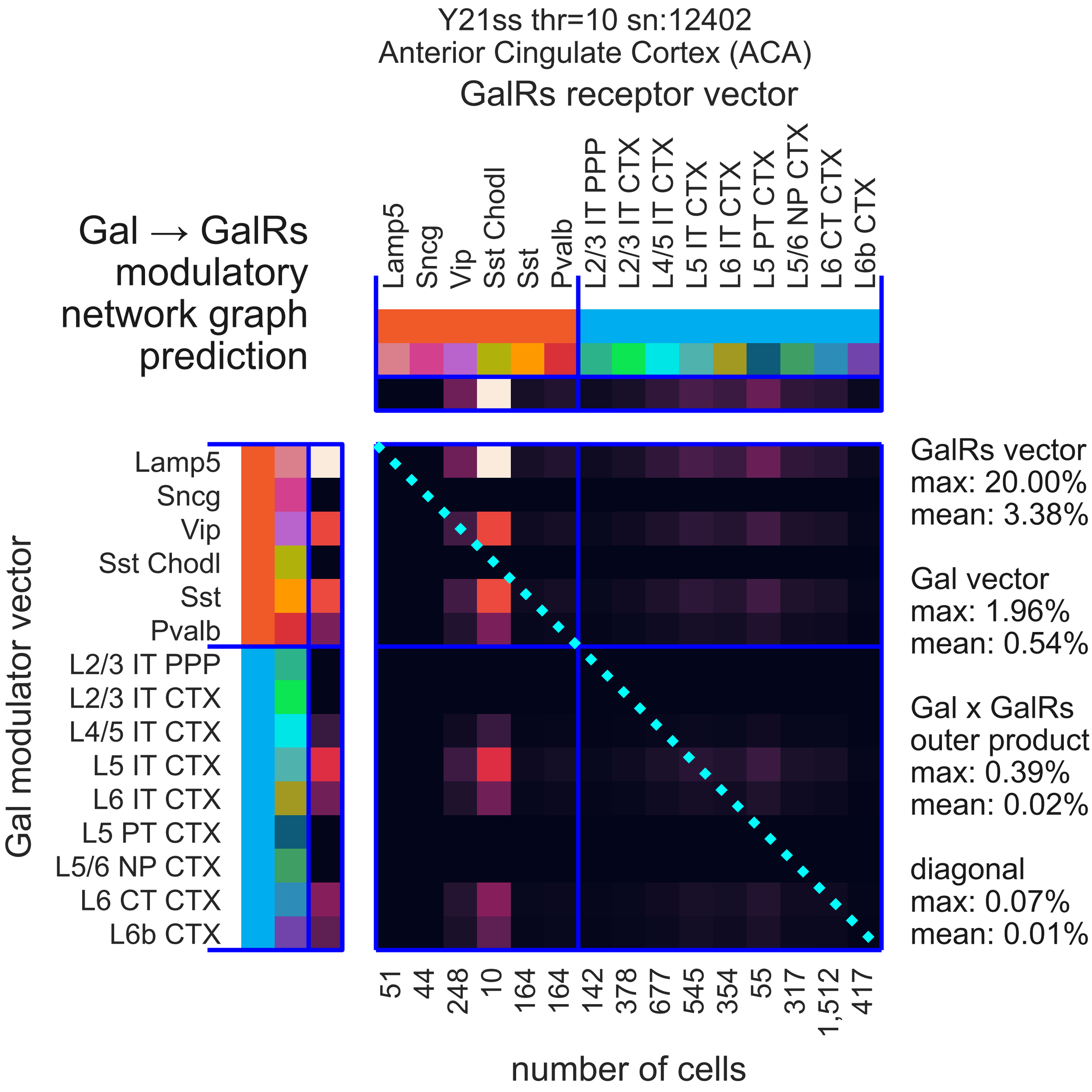
Y21ss thr=10 sn:12402
Prelimbic, Infralimbic Cortex (PL-ILA)

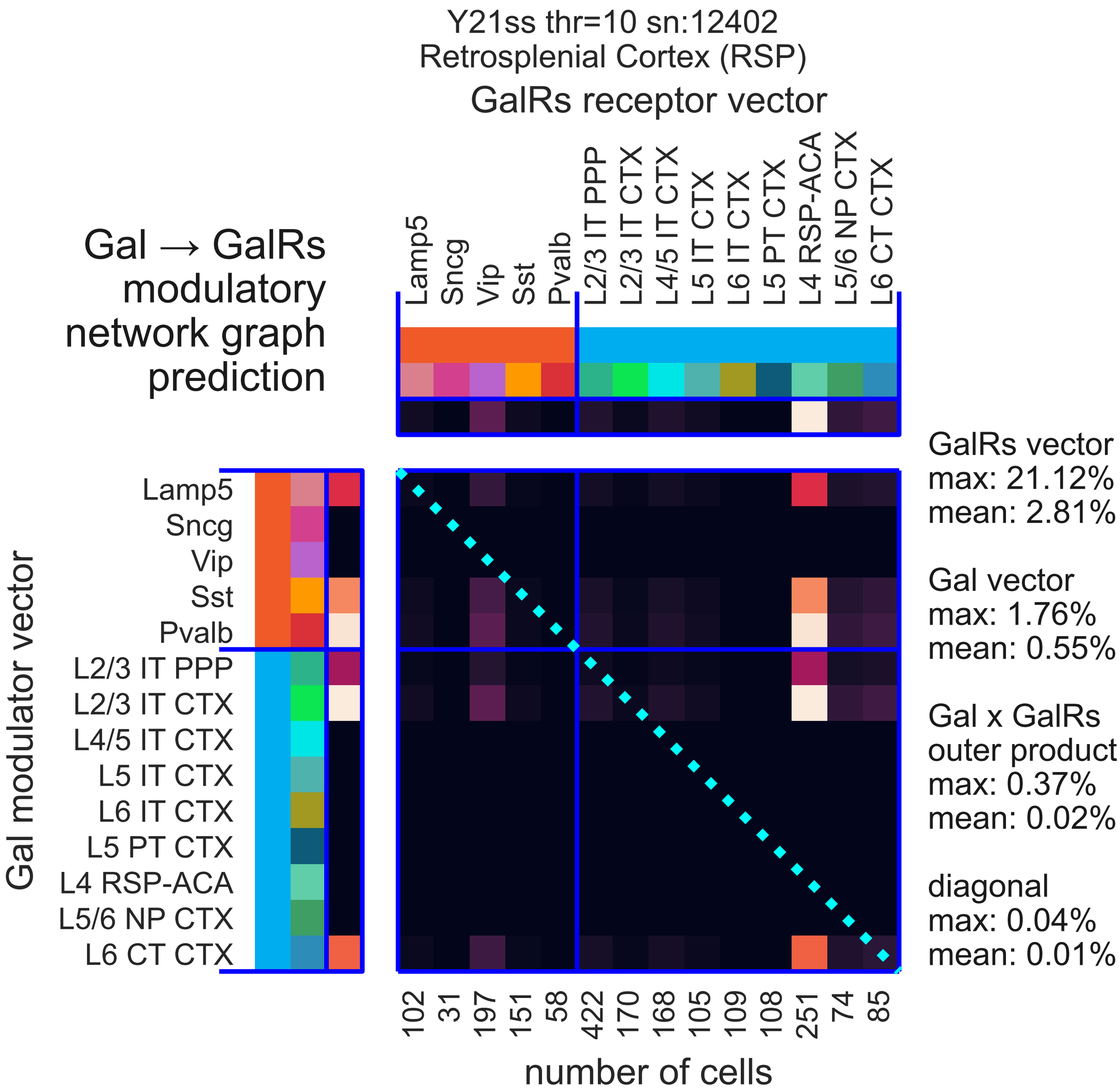


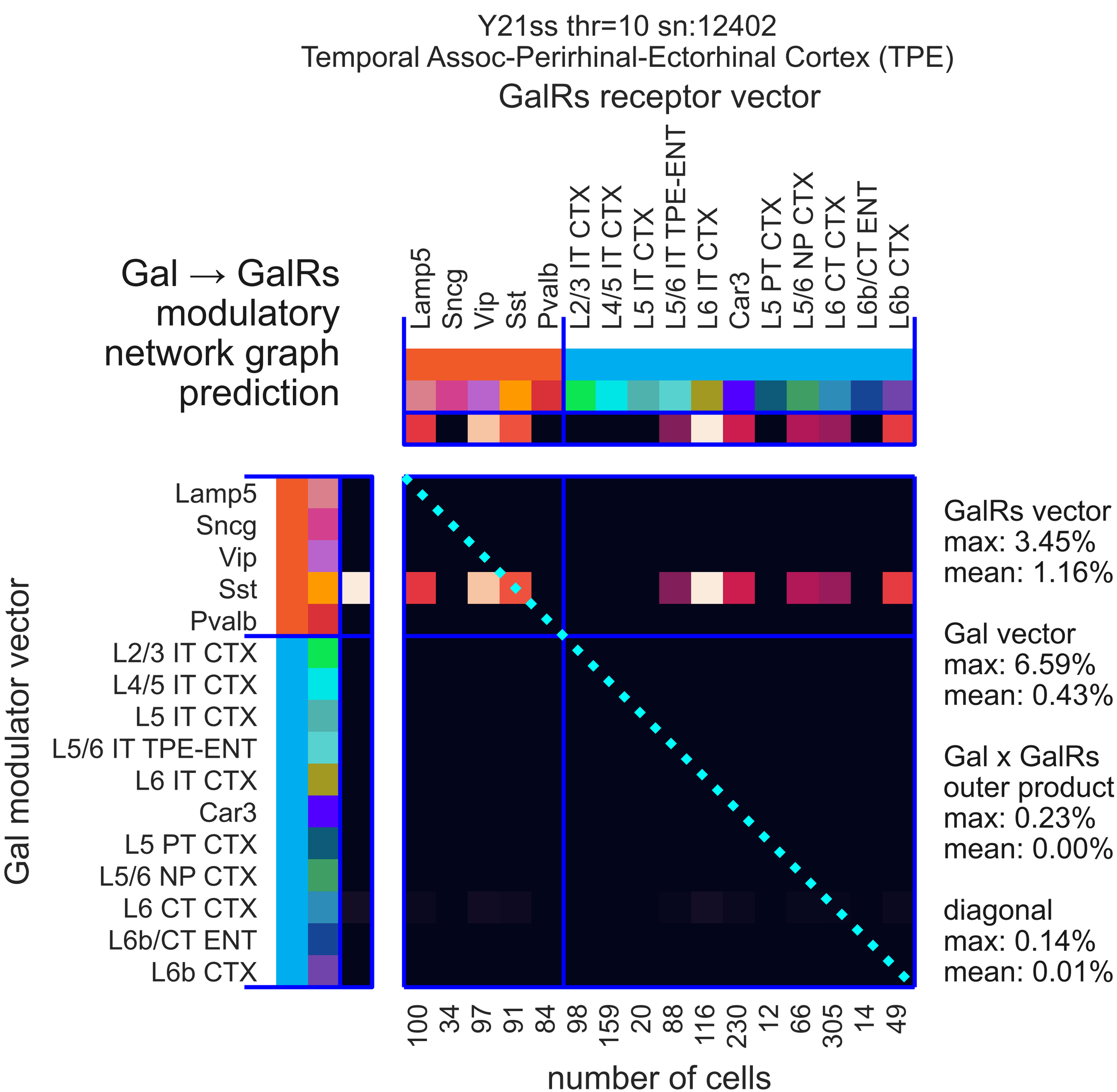

Y21ss thr=10 sn:12402
Orbital Cortex (ORB)
GalRs receptor vector
Gal → GalRs
modulatory
network graph
prediction
Meis2
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
Gal modulator vector
67
56
26
112
81
23
338
289
106
15
106
17
26
107
number of cells
GalRs vector
max: 7.69%
mean: 1.63%
Gal vector
max: 7.46%
mean: 2.04%
Gal x GalRs
outer product
max: 0.57%
mean: 0.03%
diagonal
max: 0.30%
mean: 0.05%

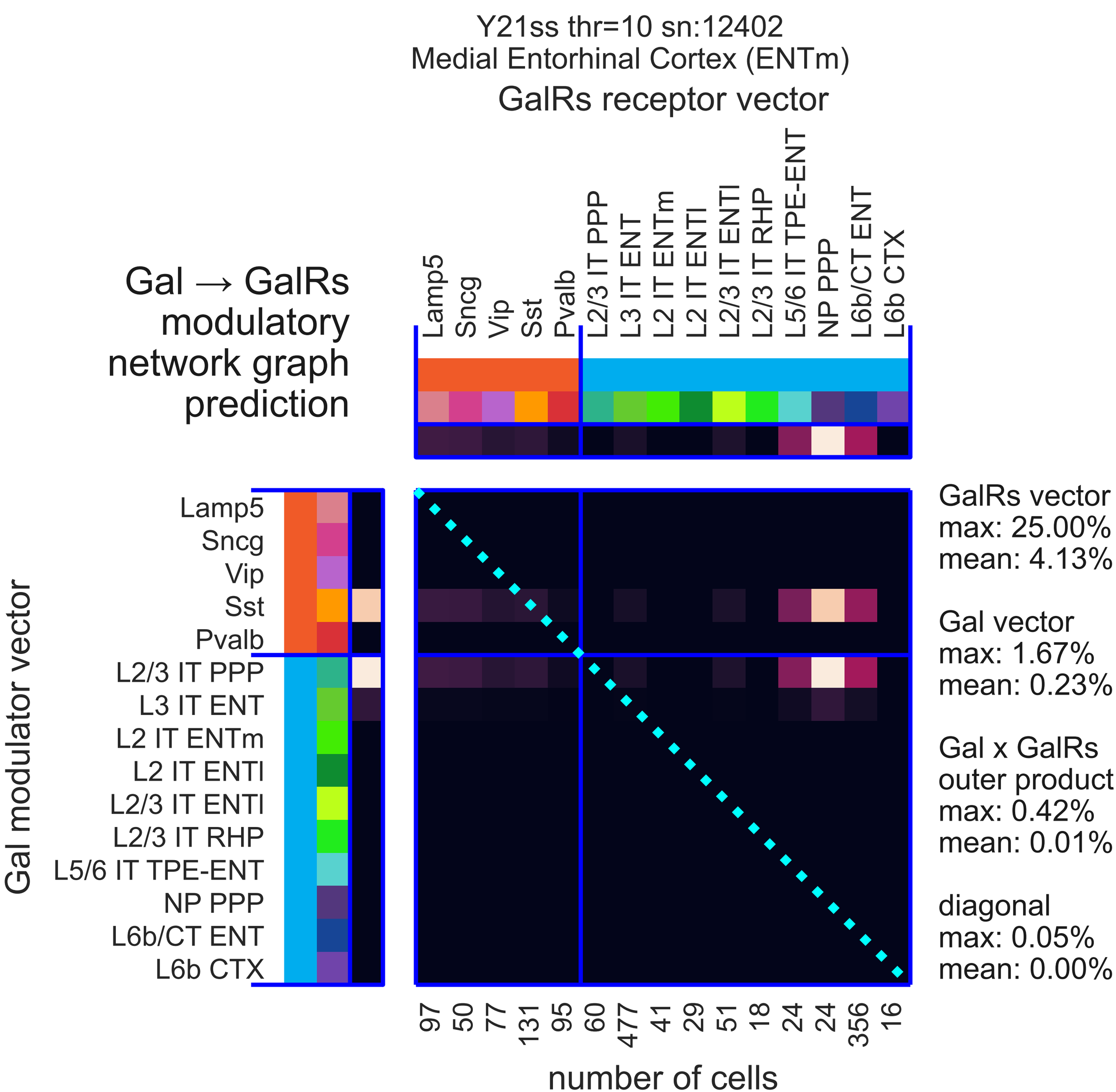
Y21ss thr=10 sn:12402
Agranular Insular Cortex (AI)

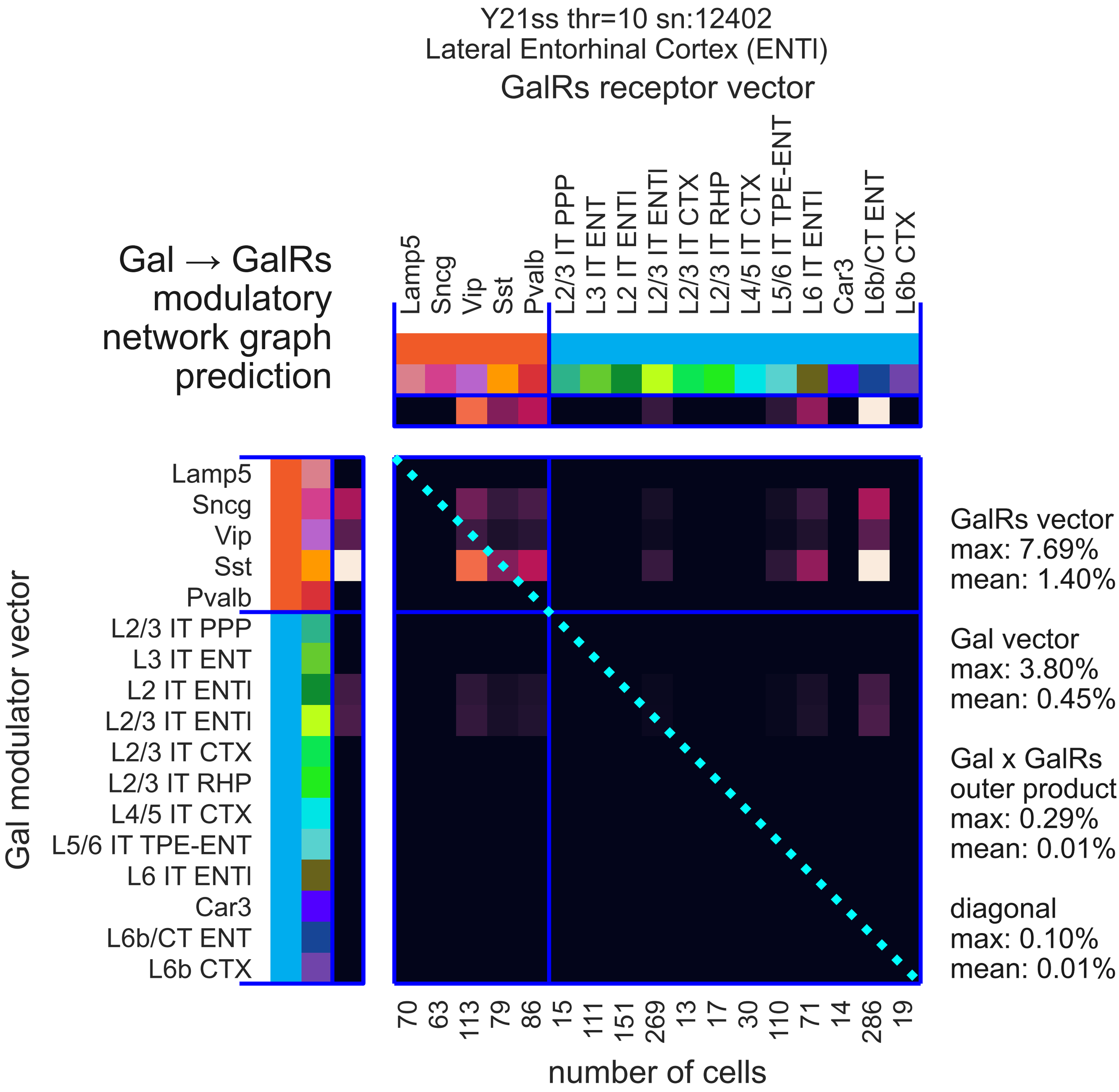



Y21ss thr=10 sn:12402
Anterior Cingulate Cortex (ACA)
GalRs receptor vector
Gal → GalRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst Chodl
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b CTX
Gal modulator vector
51
44
248
10
164
164
142
378
677
545
354
55
317
1,512
417
number of cells
GalRs vector
max: 20.00%
mean: 3.38%
Gal vector
max: 1.96%
mean: 0.54%
Gal x GalRs
outer product
max: 0.39%
mean: 0.02%
diagonal
max: 0.07%
mean: 0.01%

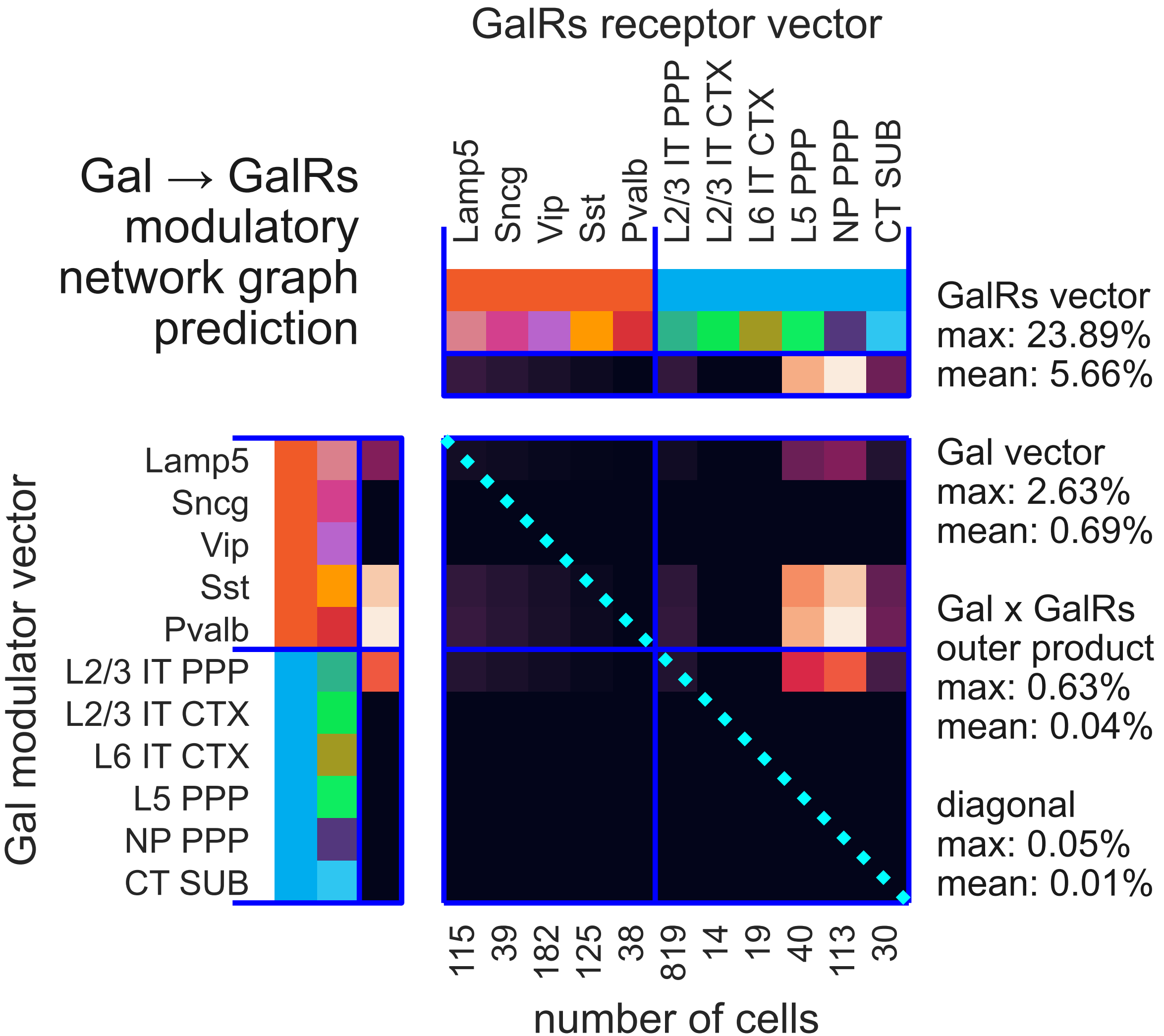

Y21ss thr=10 sn:12402
Retrosplenial Cortex (RSP)
GalRs receptor vector
Gal → GalRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L6 IT CTX
L5 PT CTX
L4 RSP-ACA
L5/6 NP CTX
L6 CT CTX
Gal modulator vector
102
31
197
151
58
422
170
168
105
109
108
251
74
85
number of cells
GalRs vector
max: 21.12%
mean: 2.81%
Gal vector
max: 1.76%
mean: 0.55%
Gal x GalRs
outer product
max: 0.37%
mean: 0.02%
diagonal
max: 0.04%
mean: 0.01%

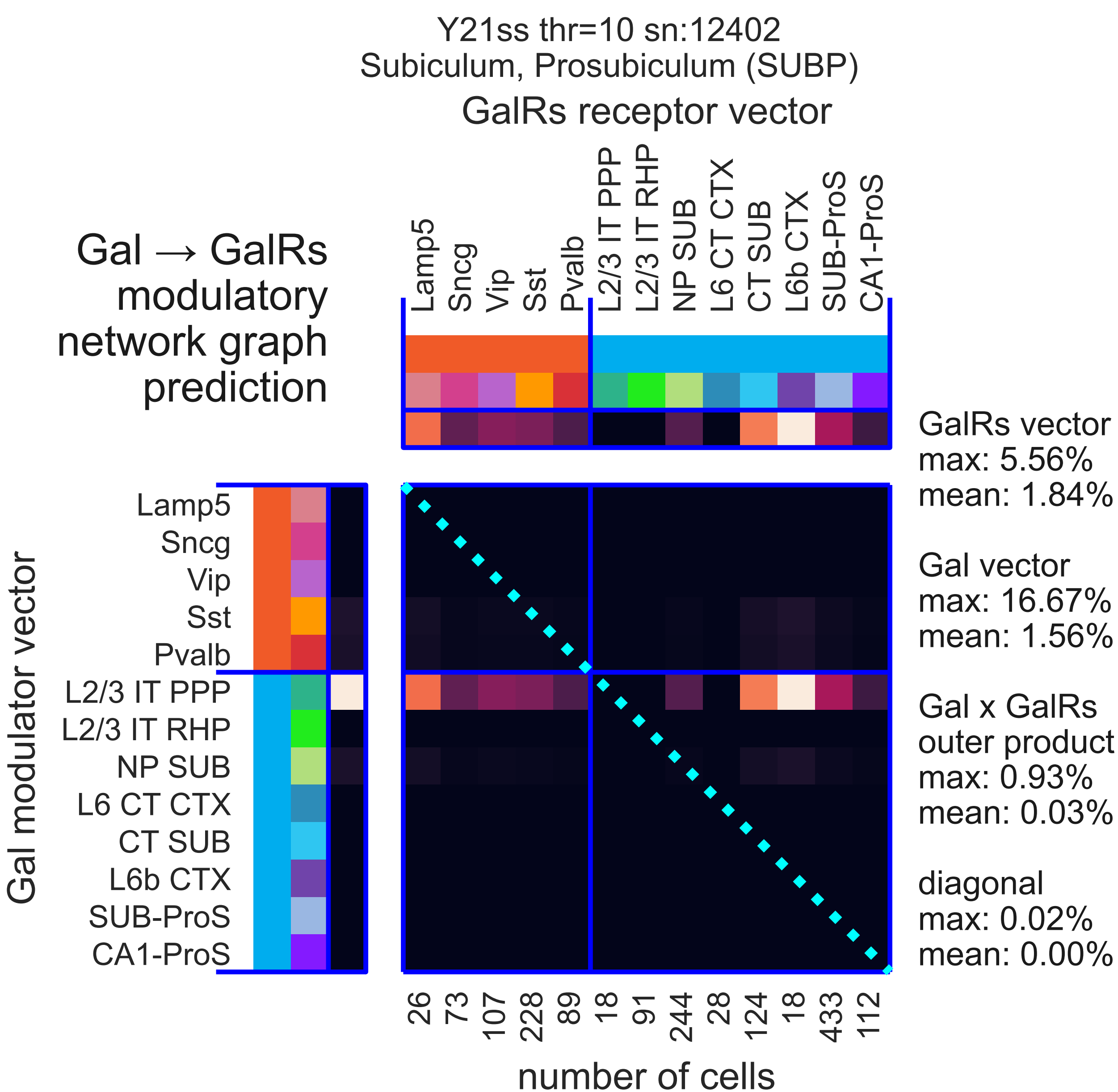

Y21ss thr=10 sn:12402
Temporal Assoc-Perirhinal-Ectorhinal Cortex (TPE)
GalRs receptor vector
Gal → GalRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT CTX
L4/5 IT CTX
L5 IT CTX
L5/6 IT TPE-ENT
L6 IT CTX
Car3
L5 PT CTX
L5/6 NP CTX
L6 CT CTX
L6b/CT ENT
L6b CTX
Gal modulator vector
100
34
97
91
84
98
159
20
88
116
230
12
66
305
14
49
number of cells
GalRs vector
max: 3.45%
mean: 1.16%
Gal vector
max: 6.59%
mean: 0.43%
Gal x GalRs
outer product
max: 0.23%
mean: 0.00%
diagonal
max: 0.14%
mean: 0.01%


Y21ss thr=10 sn:12402
Medial Entorhinal Cortex (ENTm)
GalRs receptor vector
Gal → GalRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTm
L2 IT ENTl
L2/3 IT ENTl
L2/3 IT RHP
L5/6 IT TPE-ENT
NP PPP
L6b/CT ENT
L6b CTX
Gal modulator vector
97
50
77
131
95
60
477
41
29
51
18
24
24
356
16
number of cells
GalRs vector
max: 25.00%
mean: 4.13%
Gal vector
max: 1.67%
mean: 0.23%
Gal x GalRs
outer product
max: 0.42%
mean: 0.01%
diagonal
max: 0.05%
mean: 0.00%


Y21ss thr=10 sn:12402
Lateral Entorhinal Cortex (ENTI)
GalRs receptor vector
Gal → GalRs
modulatory
network graph
prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L3 IT ENT
L2 IT ENTI
L2/3 IT ENTI
L2/3 IT CTX
L2/3 IT RHP
L4/5 IT CTX
L5/6 IT TPE-ENT
L6 IT ENTI
Car3
L6b/CT ENT
L6b CTX
Gal modulator vector
GalRs vector
max: 7.69%
mean: 1.40%
Gal vector
max: 3.80%
mean: 0.45%
Gal x GalRs
outer product
max: 0.29%
mean: 0.01%
diagonal
max: 0.10%
mean: 0.01%
70
63
113
79
86
15
111
151
269
13
17
30
110
71
14
286
19
number of cells

Y21ss thr=10 sn:12402
Parasubiculum, Postsubiculum, Presubiculum (PPP)

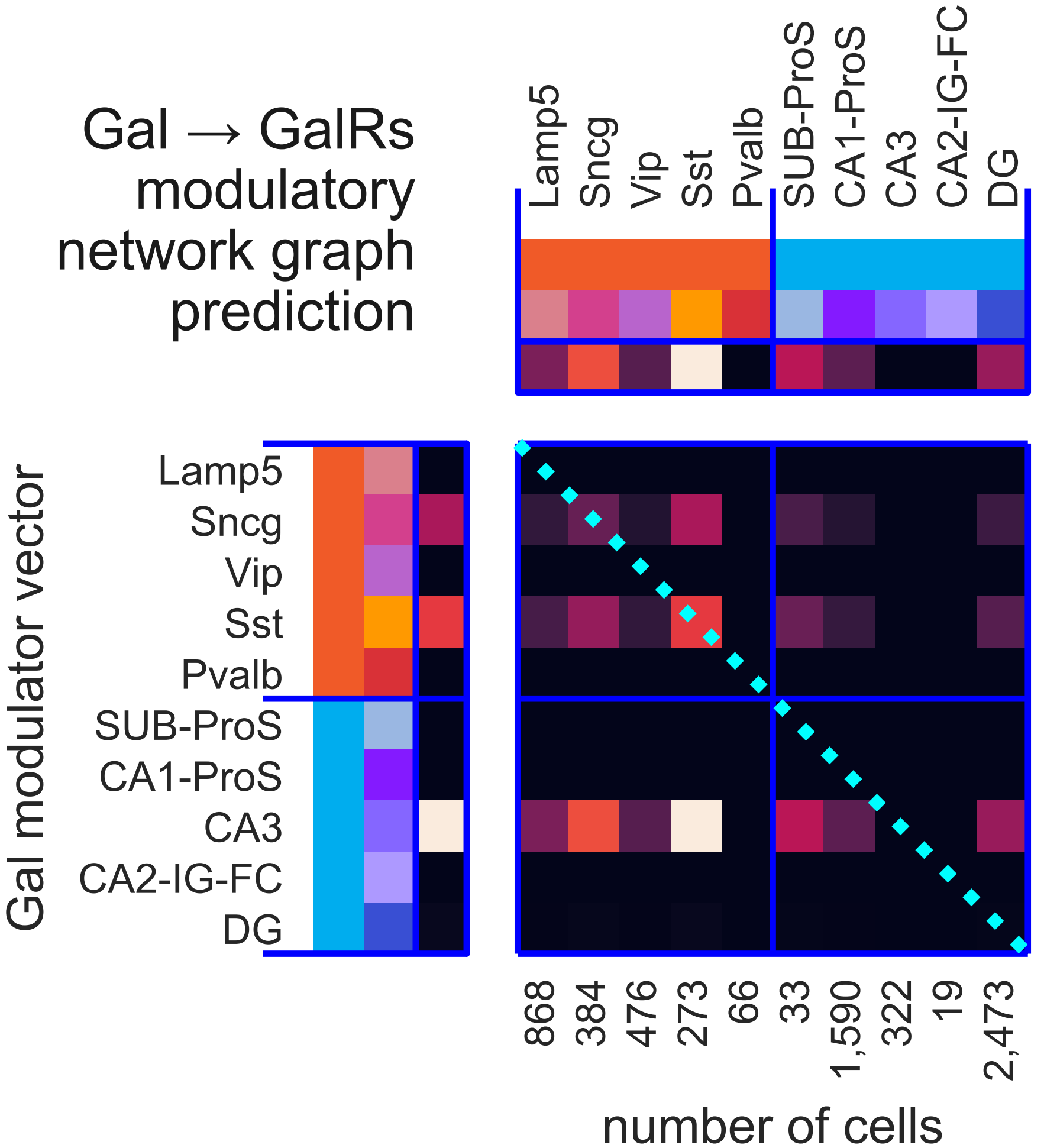



Y21ss thr=10 sn:12402
Subiculum, Prosubiculum (SUBP)
GalRs receptor vector
Gal → GalRs modulatory network graph prediction
Lamp5
Sncg
Vip
Sst
Pvalb
L2/3 IT PPP
L2/3 IT RHP
NP SUB
L6 CT CTX
CT SUB
L6b CTX
SUB-ProS
CA1-ProS
GalRs vector
max: 5.56%
mean: 1.84%
Gal vector
max: 16.67%
mean: 1.56%
Gal x GalRs
outer product
max: 0.93%
mean: 0.03%
diagonal
max: 0.02%
mean: 0.00%
Gal modulator vector
26
73
107
228
89
18
91
244
28
124
18
433
112
number of cells

Y21ss thr=10 sn:12402
Hippocampus (HIP)

GalRs receptor vector

Gal → GalRs modulatory network graph prediction



GalRs vector
max: 6.59%
mean: 2.14%

Gal vector
max: 1.86%
mean: 0.38%

Gal x GalRs
outer product
max: 0.12%
mean: 0.01%

diagonal
max: 0.07%
mean: 0.01%