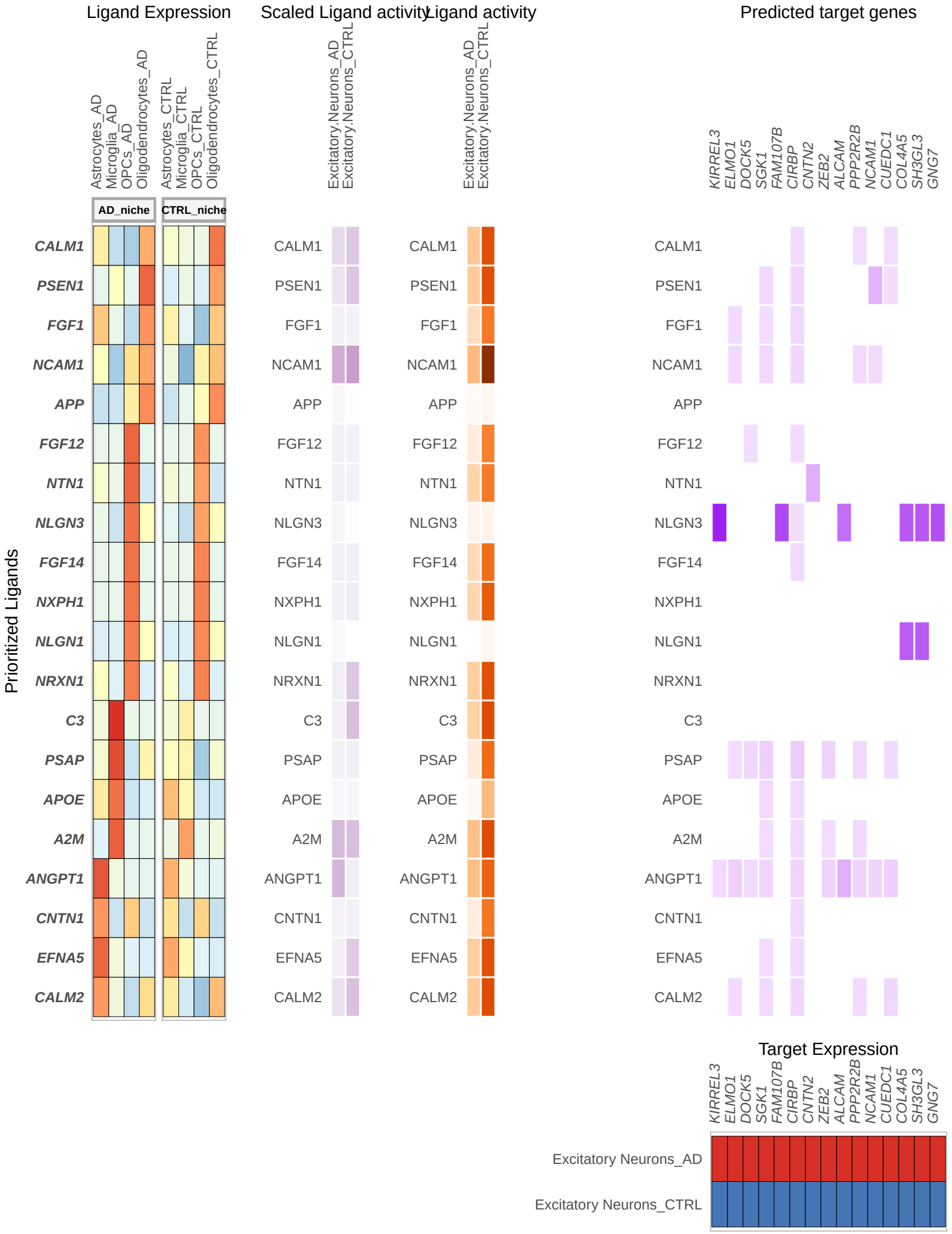
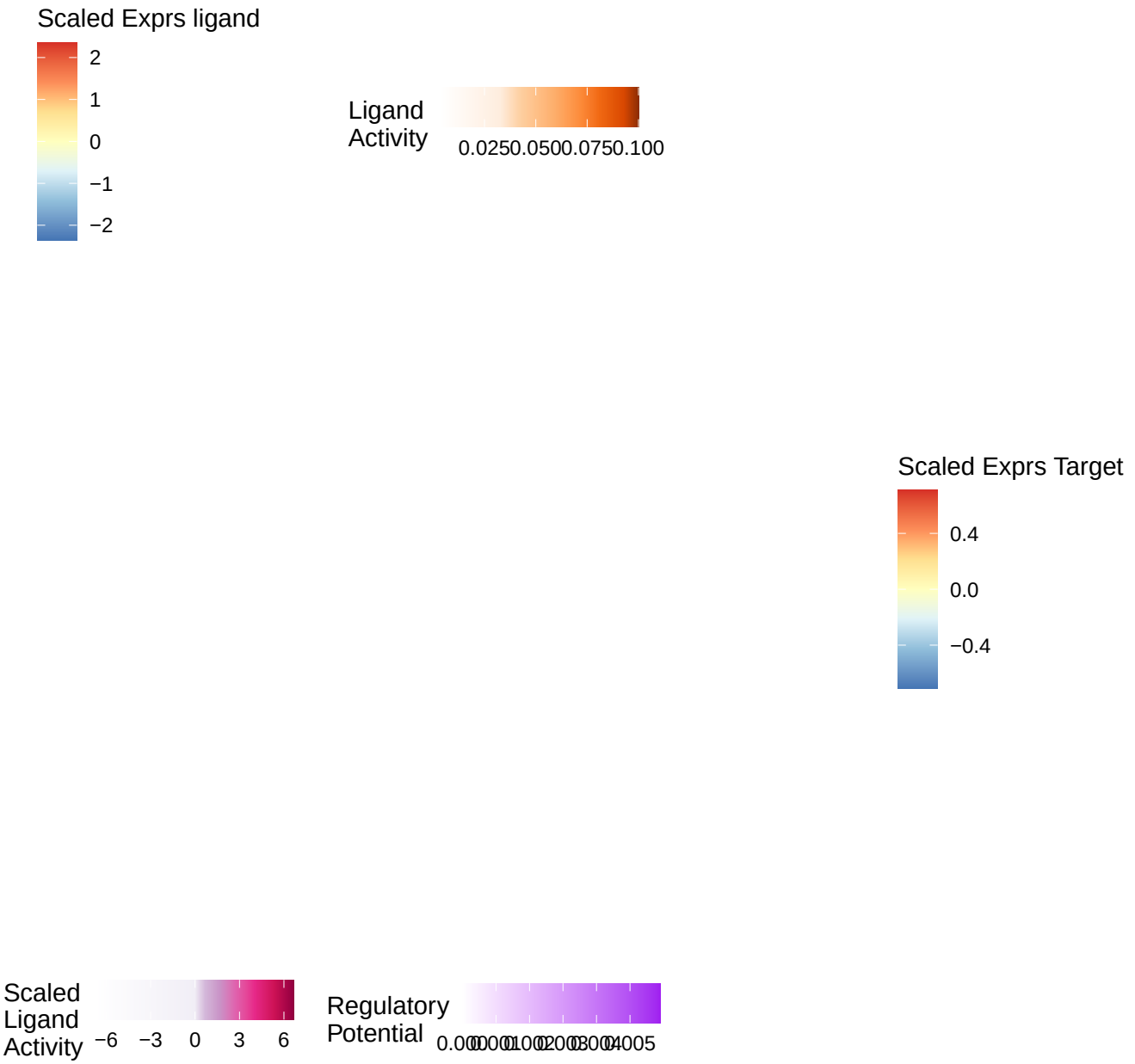
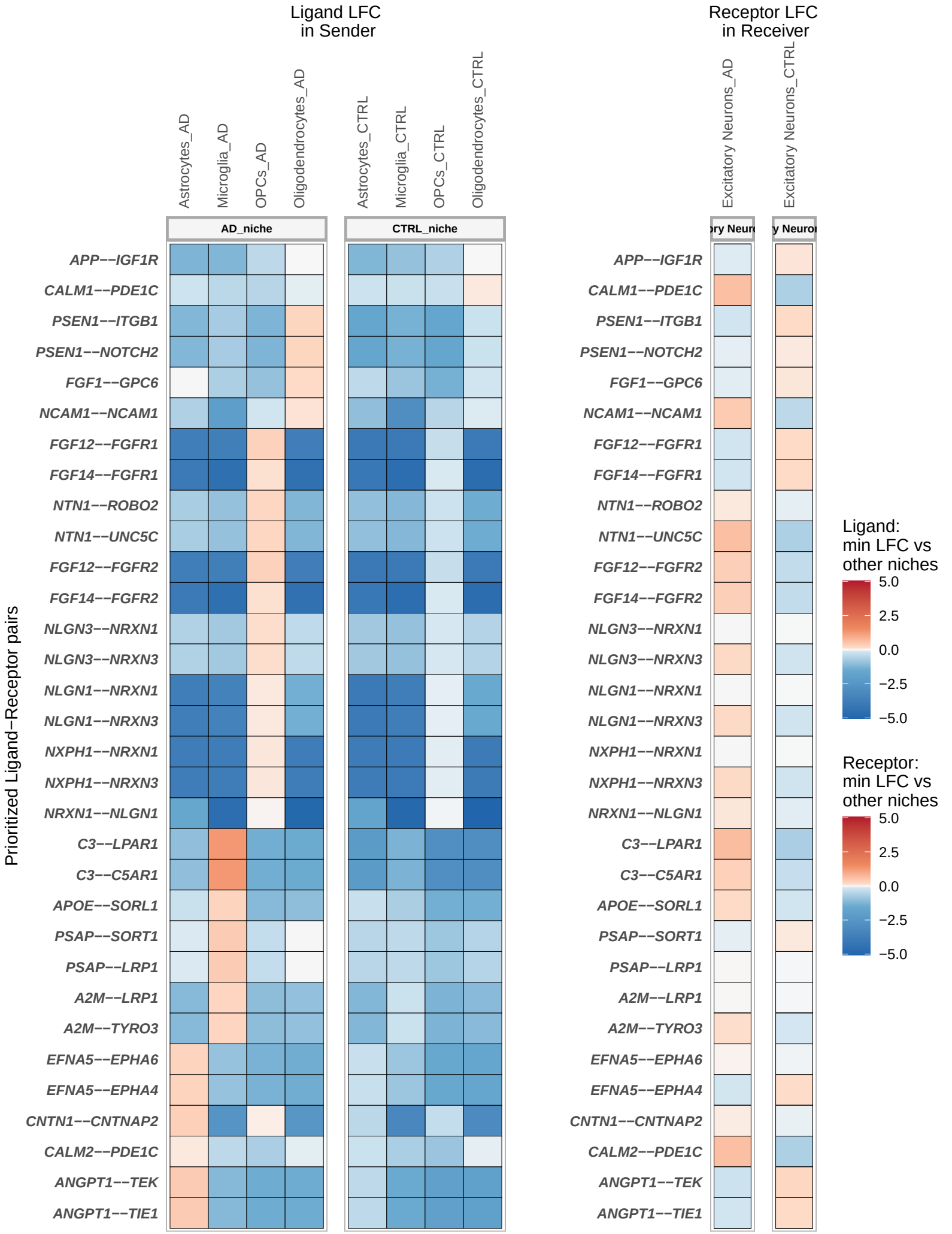
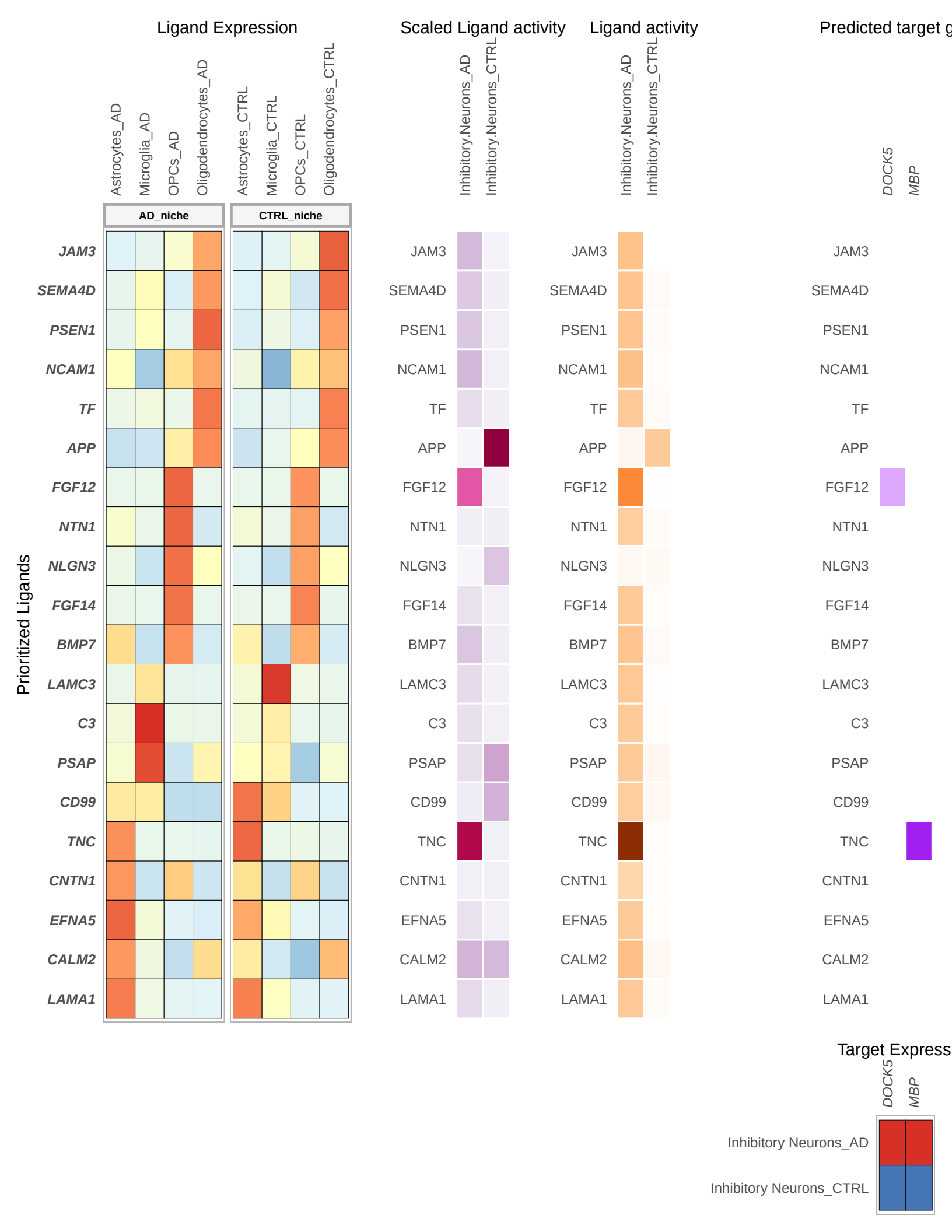
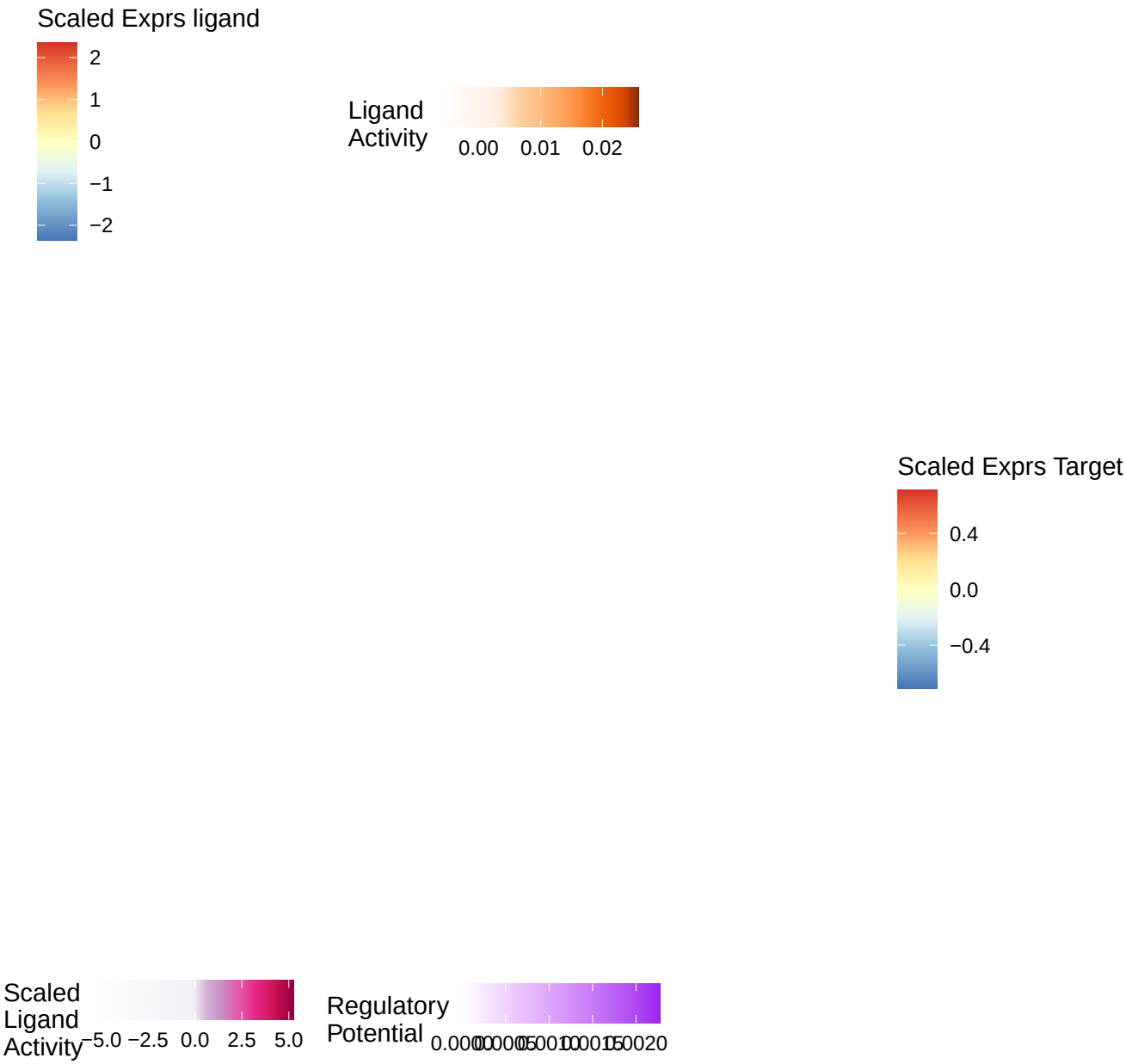
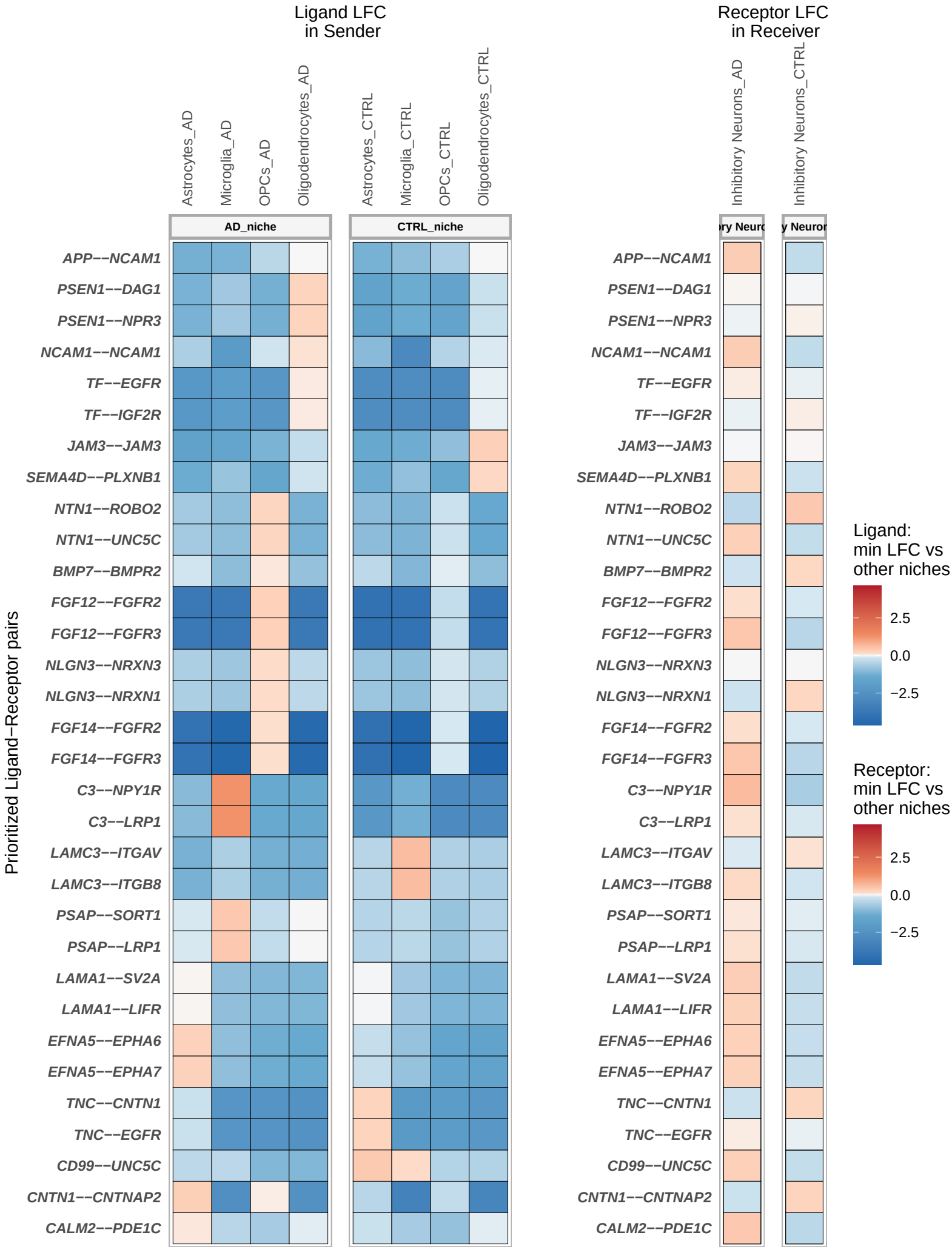

Ligand Expression
Scaled Ligand activity
Ligand activity
Predicted target genes
Astrocytes_AD
Microglia_AD
OPCs_AD
Oligodendrocytes_AD
Astrocytes_CTRL
Microglia_CTRL
OPCs_CTRL
Oligodendrocytes_CTRL
AD_niche
CTRL_niche
Excitatory.Neurons_AD
Excitatory.Neurons_CTRL
KIRREL3
ELMO1
DOCK5
SGK1
FAM107B
CIRBP
CNTN2
ZEB2
ALCAM
PPP2R2B
NCAM1
CUEDC1
COL4A5
SH3GL3
GNG7
Prioritized Ligands
CALM1
PSEN1
FGF1
NCAM1
APP
FGF12
NTN1
NLGN3
FGF14
NXPH1
NLGN1
NRXN1
C3
PSAP
APOE
A2M
ANGPT1
CNTN1
EFNA5
CALM2
Target Expression
Excitatory Neurons_AD
Excitatory Neurons_CTRL


Scaled Exprs ligand
2
1
0
−1
−2
Ligand Activity
0.025
0.050
0.075
0.100
Scaled Exprs Target
0.4
0.0
−0.4
Scaled Ligand Activity
−6
−3
0
3
6
Regulatory Potential
0.000
0.001
0.002
0.003
0.004
0.005


Ligand LFC
in Sender
Receptor LFC
in Receiver
Astrocytes_AD
Microglia_AD
OPCs_AD
Oligodendrocytes_AD
Astrocytes_CTRL
Microglia_CTRL
OPCs_CTRL
Oligodendrocytes_CTRL
Excitatory Neurons_AD
Excitatory Neurons_CTRL
AD_niche
CTRL_niche
Prioritized Ligand−Receptor pairs
APP−−IGF1R
CALM1−−PDE1C
PSEN1−−ITGB1
PSEN1−−NOTCH2
FGF1−−GPC6
NCAM1−−NCAM1
FGF12−−FGFR1
FGF14−−FGFR1
NTN1−−ROBO2
NTN1−−UNC5C
FGF12−−FGFR2
FGF14−−FGFR2
NLGN3−−NRXN1
NLGN3−−NRXN3
NLGN1−−NRXN1
NLGN1−−NRXN3
NXPH1−−NRXN1
NXPH1−−NRXN3
NRXN1−−NLGN1
C3−−LPAR1
C3−−C5AR1
APOE−−SORL1
PSAP−−SORT1
PSAP−−LRP1
A2M−−LRP1
A2M−−TYRO3
EFNA5−−EPHA6
EFNA5−−EPHA4
CNTN1−−CNTNAP2
CALM2−−PDE1C
ANGPT1−−TEK
ANGPT1−−TIE1
Ligand:
min LFC vs
other niches
5.0
2.5
0.0
−2.5
−5.0
Receptor:
min LFC vs
other niches
5.0
2.5
0.0
−2.5
−5.0


Ligand Expression
Scaled Ligand activity
Ligand activity
Predicted target g
Astrocytes_AD
Microglia_AD
OPCs_AD
Oligodendrocytes_AD
Astrocytes_CTRL
Microglia_CTRL
OPCs_CTRL
Oligodendrocytes_CTRL
Inhibitory.Neurons_AD
Inhibitory.Neurons_CTRL
DOCK5
MBP
AD_niche
CTRL_niche
Prioritized Ligands
JAM3
SEMA4D
PSEN1
NCAM1
TF
APP
FGF12
NTN1
NLGN3
FGF14
BMP7
LAMC3
C3
PSAP
CD99
TNC
CNTN1
EFNA5
CALM2
LAMA1
Target Express
Inhibitory Neurons_AD
Inhibitory Neurons_CTRL


Scaled Exprs ligand
2
1
0
−1
−2
Ligand Activity
0.00
0.01
0.02
Scaled Exprs Target
0.4
0.0
−0.4
Scaled Ligand Activity
−5.0
−2.5
0.0
2.5
5.0
Regulatory Potential


Ligand LFC
in Sender
Receptor LFC
in Receiver
Astrocytes_AD
Microglia_AD
OPCs_AD
Oligodendrocytes_AD
Astrocytes_CTRL
Microglia_CTRL
OPCs_CTRL
Oligodendrocytes_CTRL
Inhibitory Neurons_AD
Inhibitory Neurons_CTRL
AD_niche
CTRL_niche
Prioritized Ligand−Receptor pairs
APP−−NCAM1
PSEN1−−DAG1
PSEN1−−NPR3
NCAM1−−NCAM1
TF−−EGFR
TF−−IGF2R
JAM3−−JAM3
SEMA4D−−PLXNB1
NTN1−−ROBO2
NTN1−−UNC5C
BMP7−−BMPR2
FGF12−−FGFR2
FGF12−−FGFR3
NLGN3−−NRXN3
NLGN3−−NRXN1
FGF14−−FGFR2
FGF14−−FGFR3
C3−−NPY1R
C3−−LRP1
LAMC3−−ITGAV
LAMC3−−ITGB8
PSAP−−SORT1
PSAP−−LRP1
LAMA1−−SV2A
LAMA1−−LIFR
EFNA5−−EPHA6
EFNA5−−EPHA7
TNC−−CNTN1
TNC−−EGFR
CD99−−UNC5C
CNTN1−−CNTNAP2
CALM2−−PDE1C
Ligand:
min LFC vs
other niches
2.5
0.0
−2.5
Receptor:
min LFC vs
other niches
2.5
0.0
−2.5