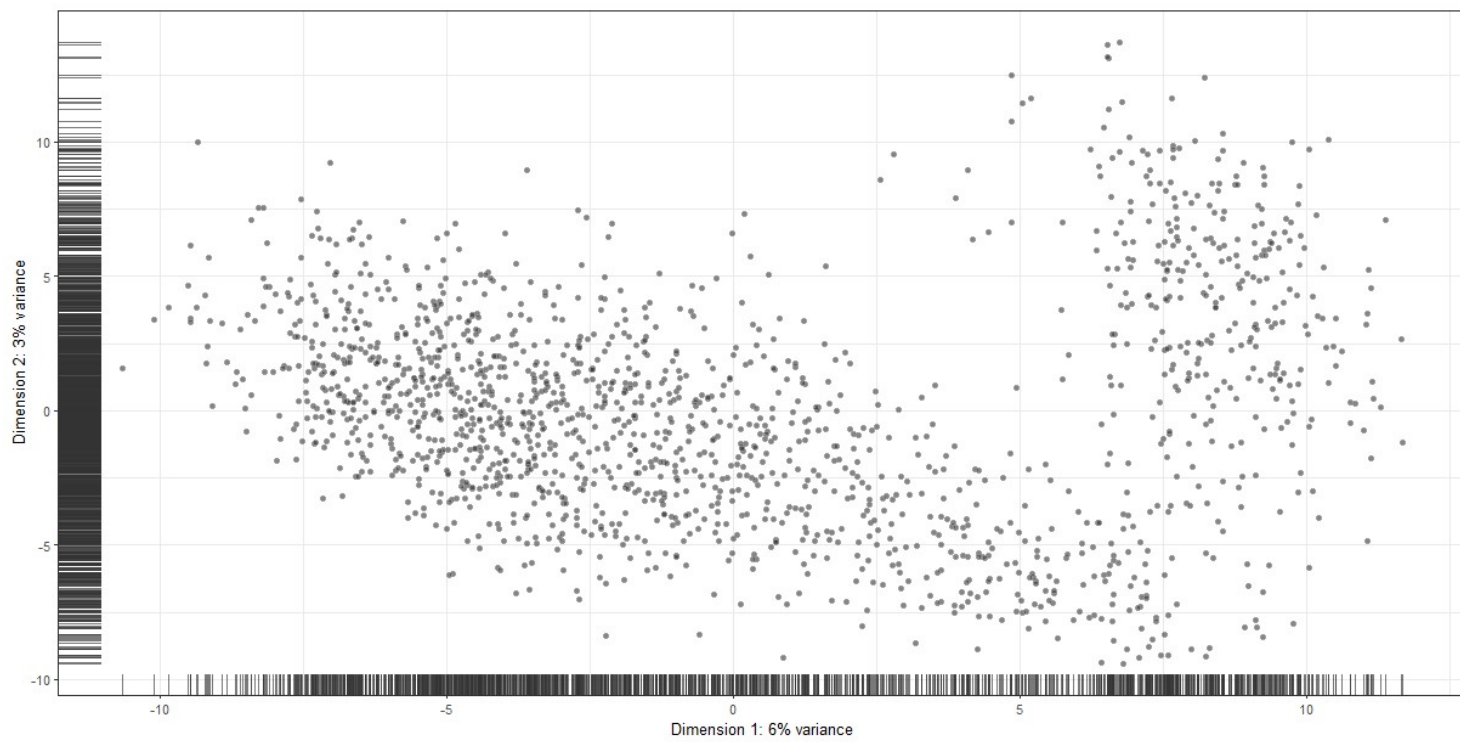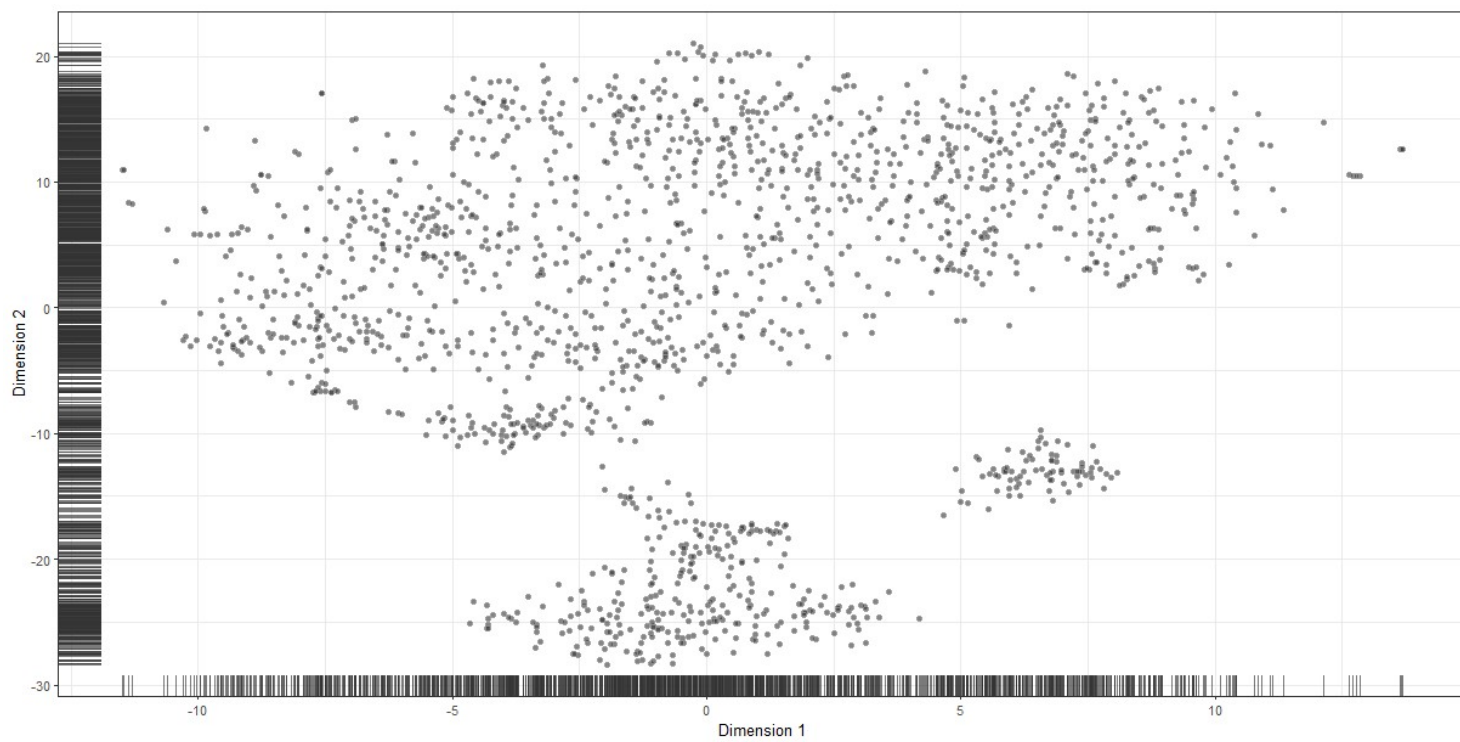# Fibroblast PCA pre-QC
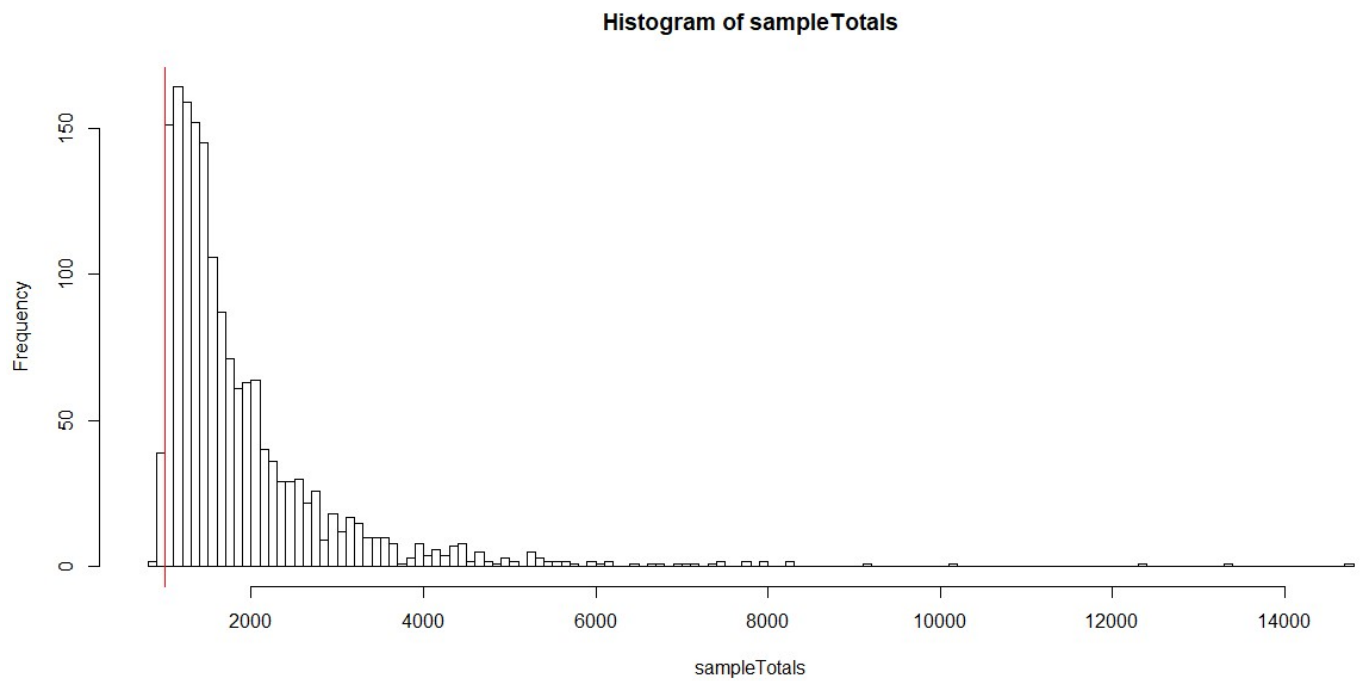

Fibroblast TSNE pre-QC

Fibroblast count totals, abline=1000

Histogram of sampleTotals

Fibroblast distribution, abline=600

Histogram of originalTotals
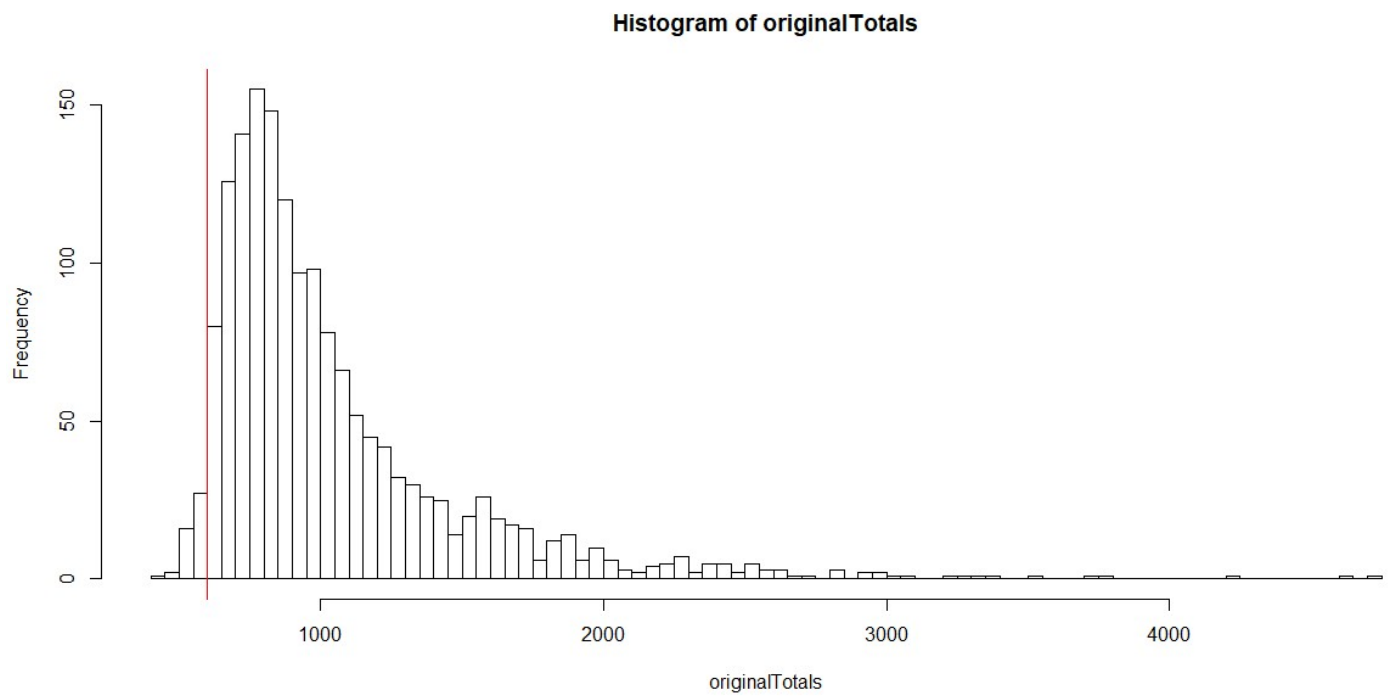
Fibroblast PCA post-QC
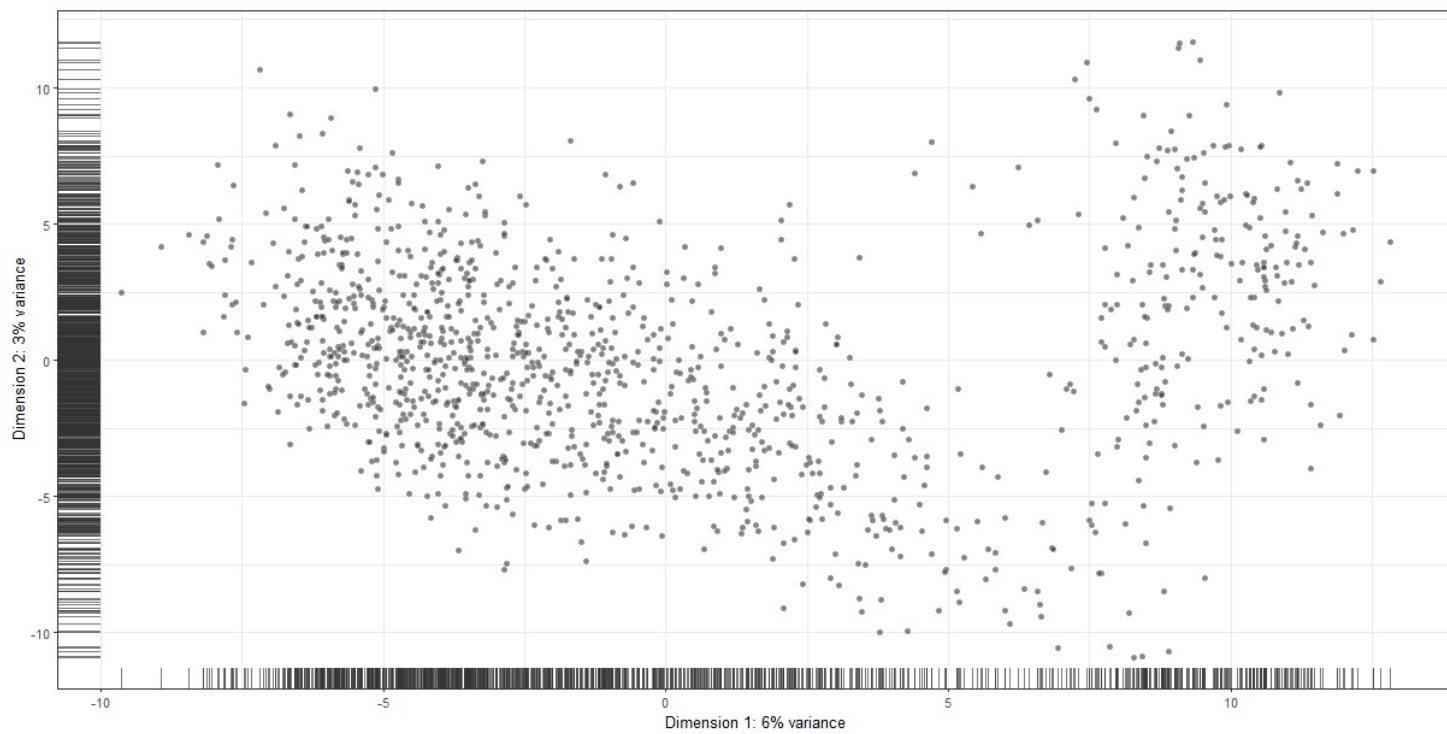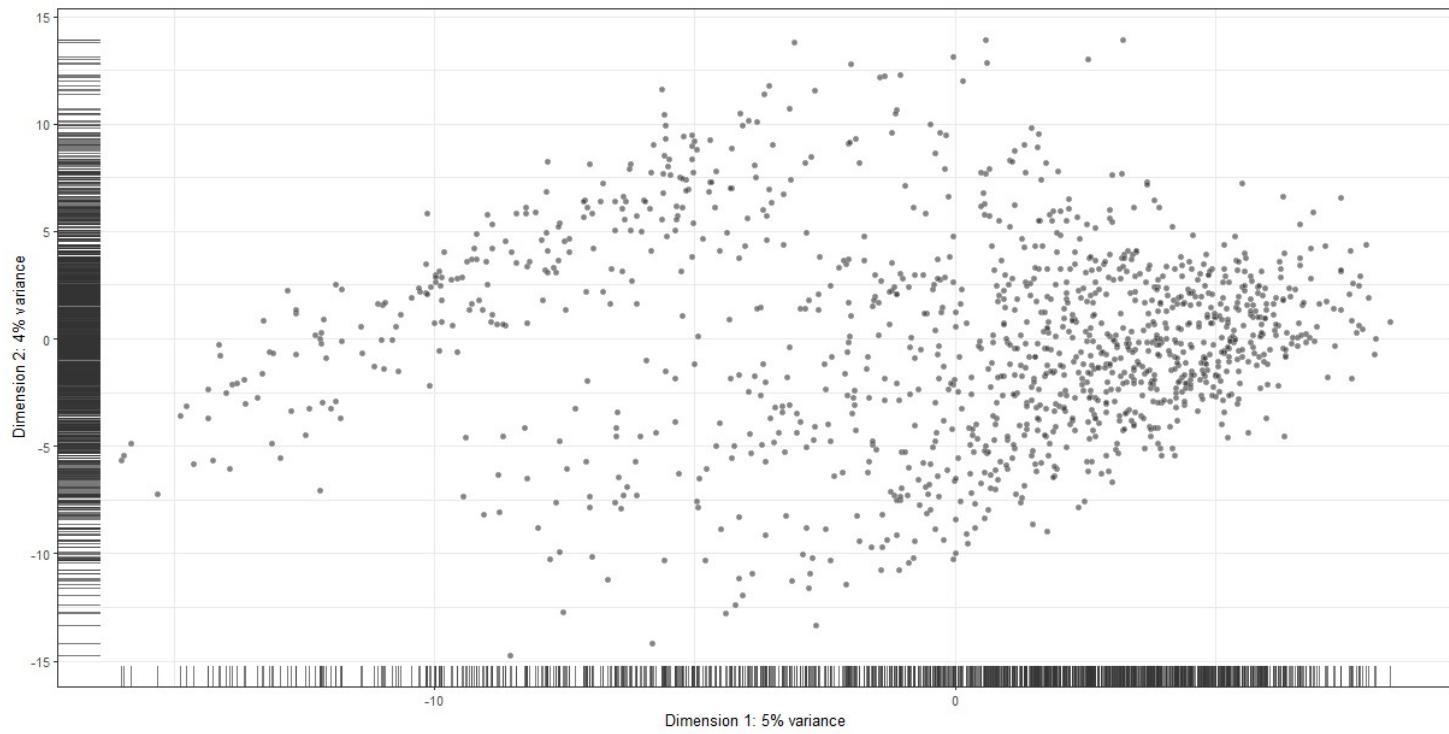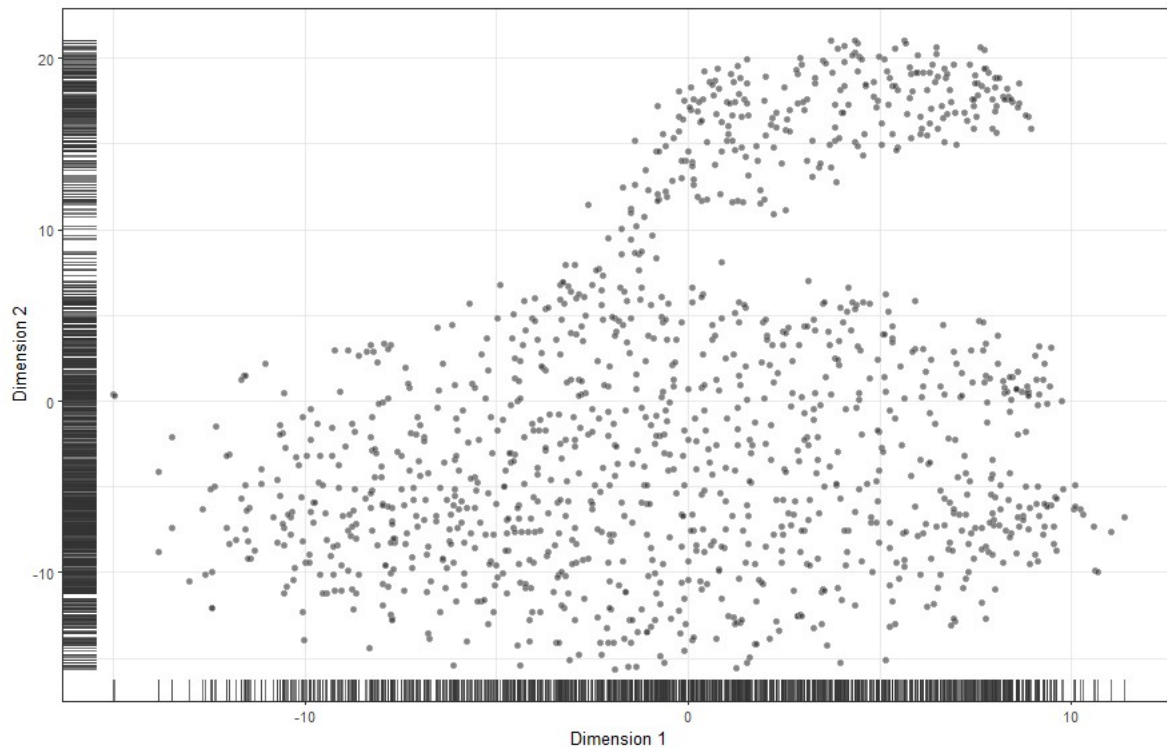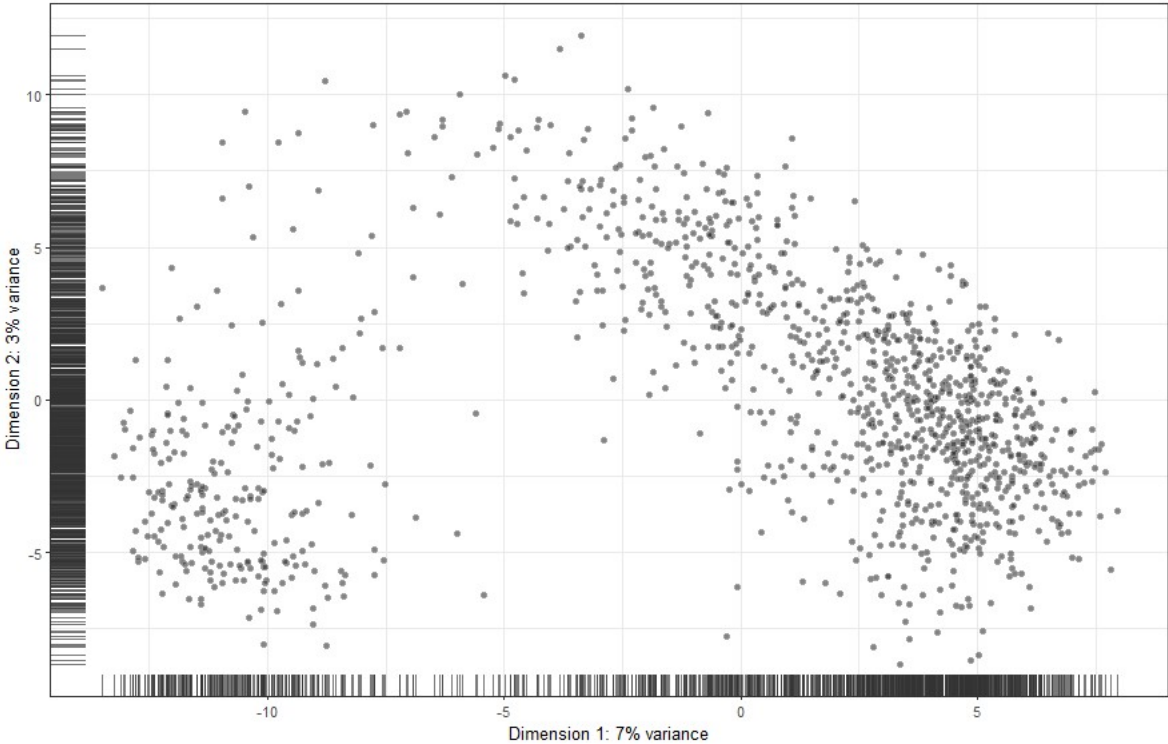

Fibroblast TSNE post-QC
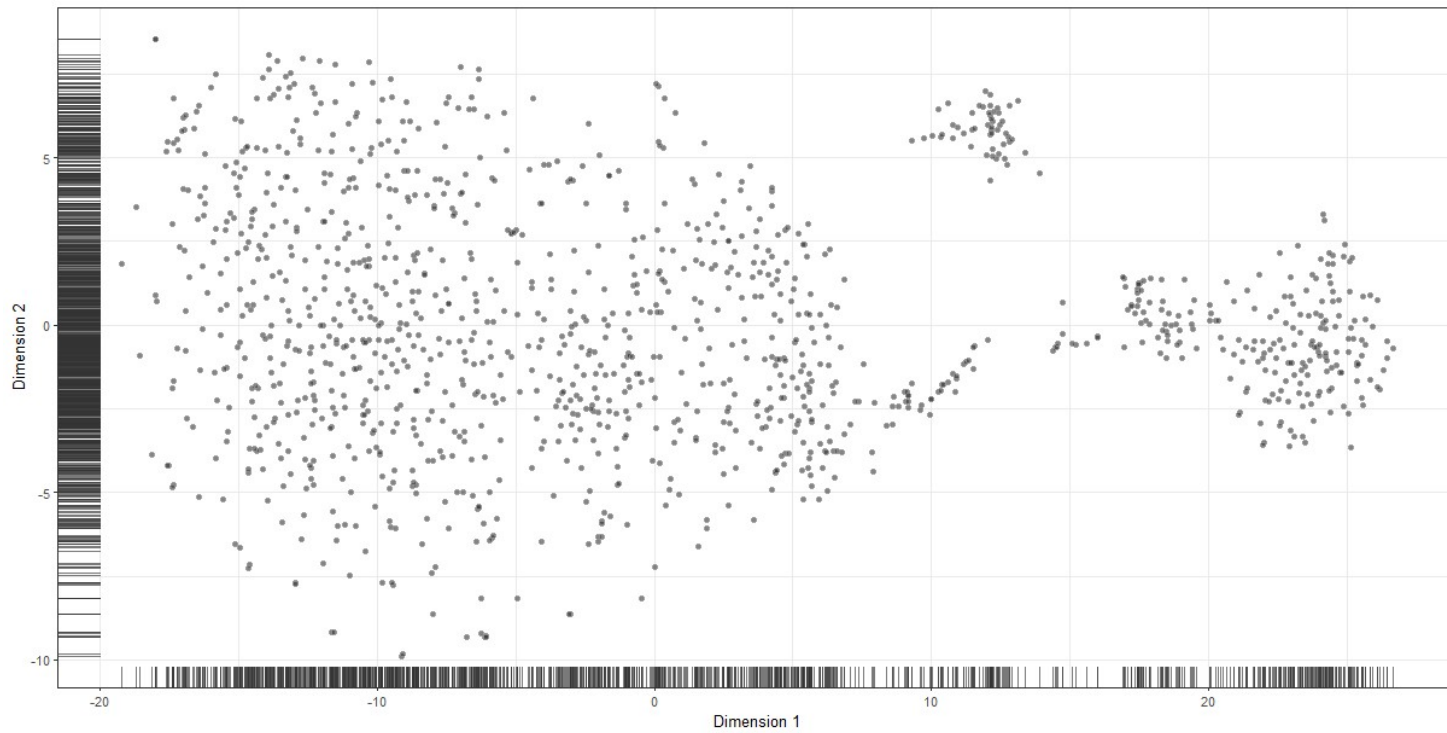
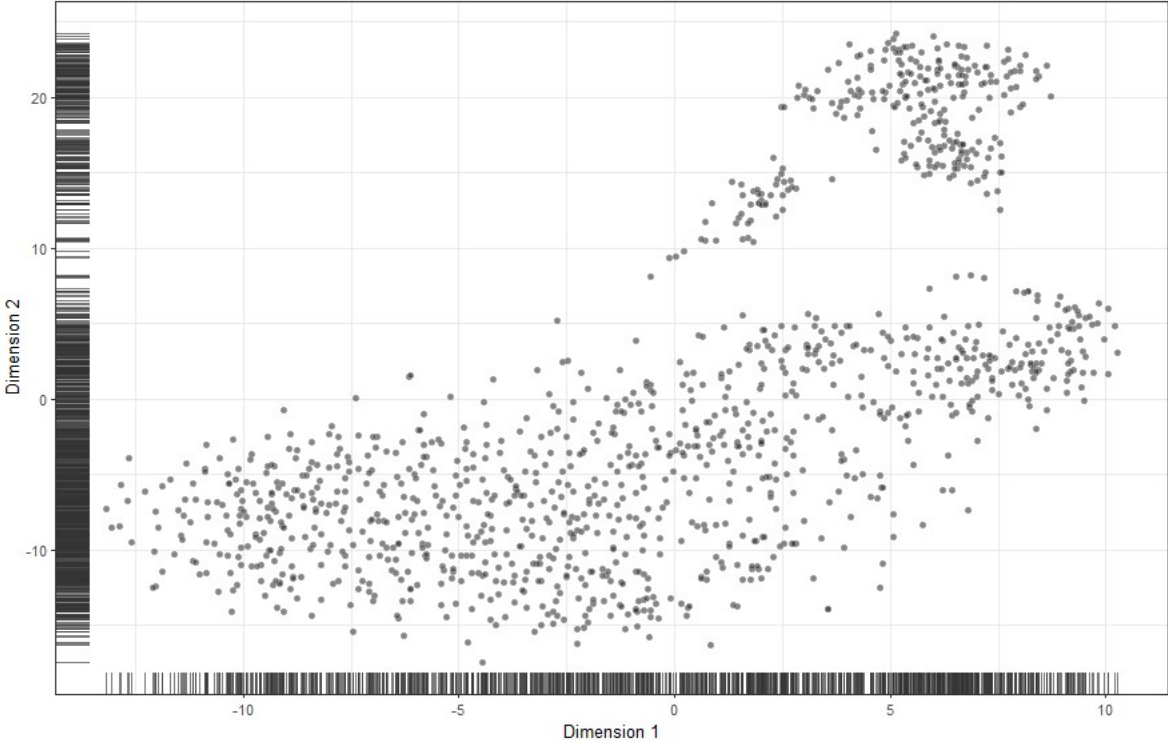# Fibroblast PCA log cpm normalized counts

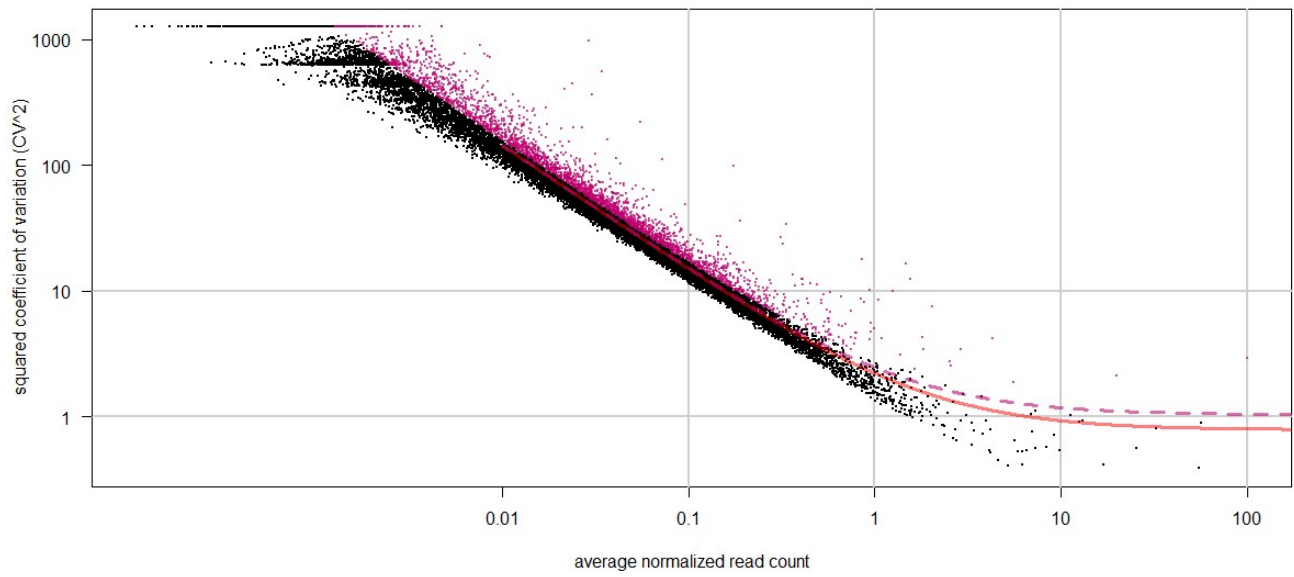

Fibroblast TSNE log cpm normalized counts

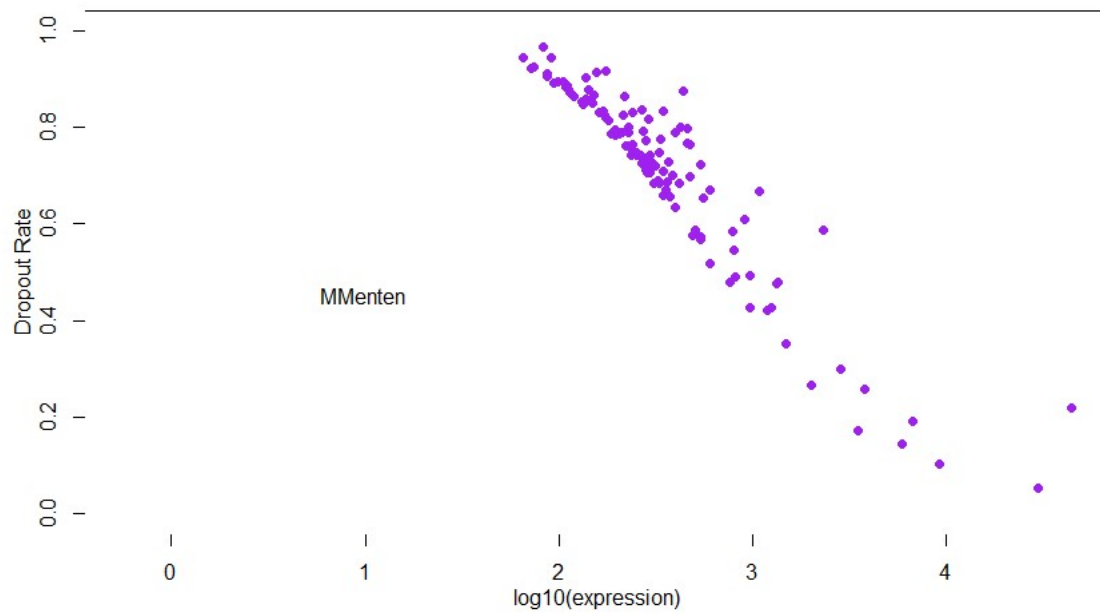# Fibroblast PCA log pool normalized

Fibroblast TSNE log pool normalized

BrenneckeGetVariableGenes

M3DropDifferentialExpression

Top 50 GENIE3 results

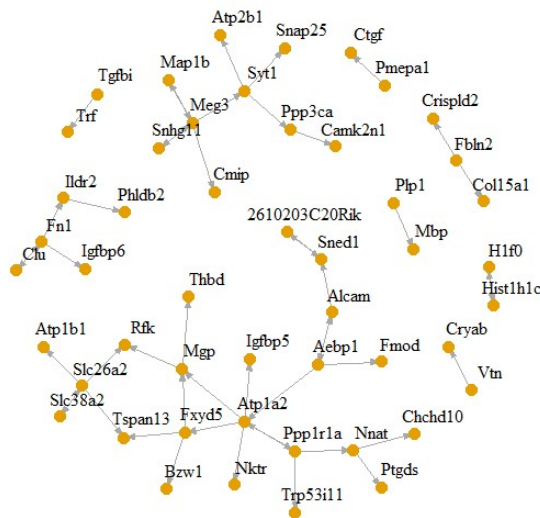5th percentile: .05 x 5700 (interaction count) = index 285
Weight value at calculated index of adjacency matrix using randomized data: 0.03355132
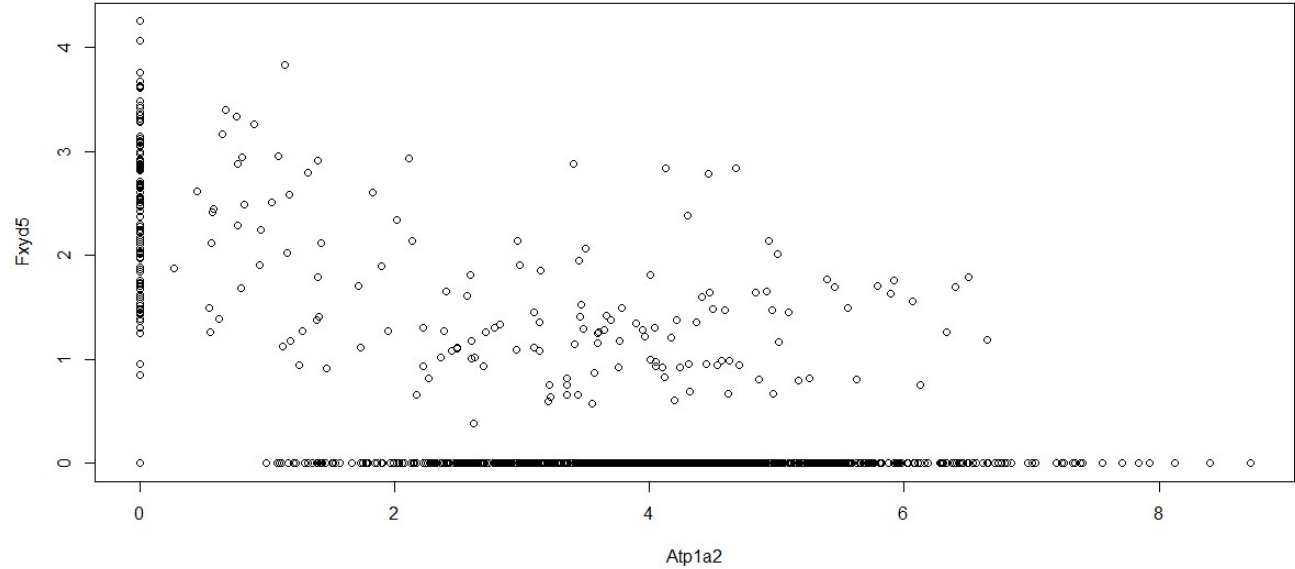Smallest index of results with weight below this threshold: 2788
704 statistically significant interactions, (0.05 x 704) = 35 projected false positives

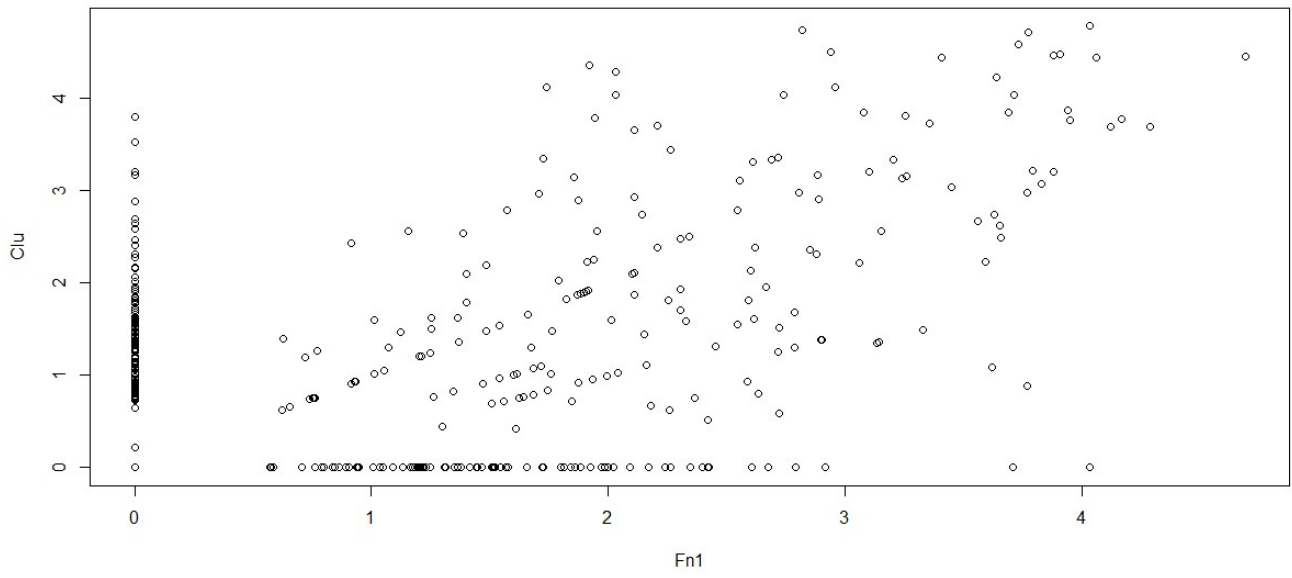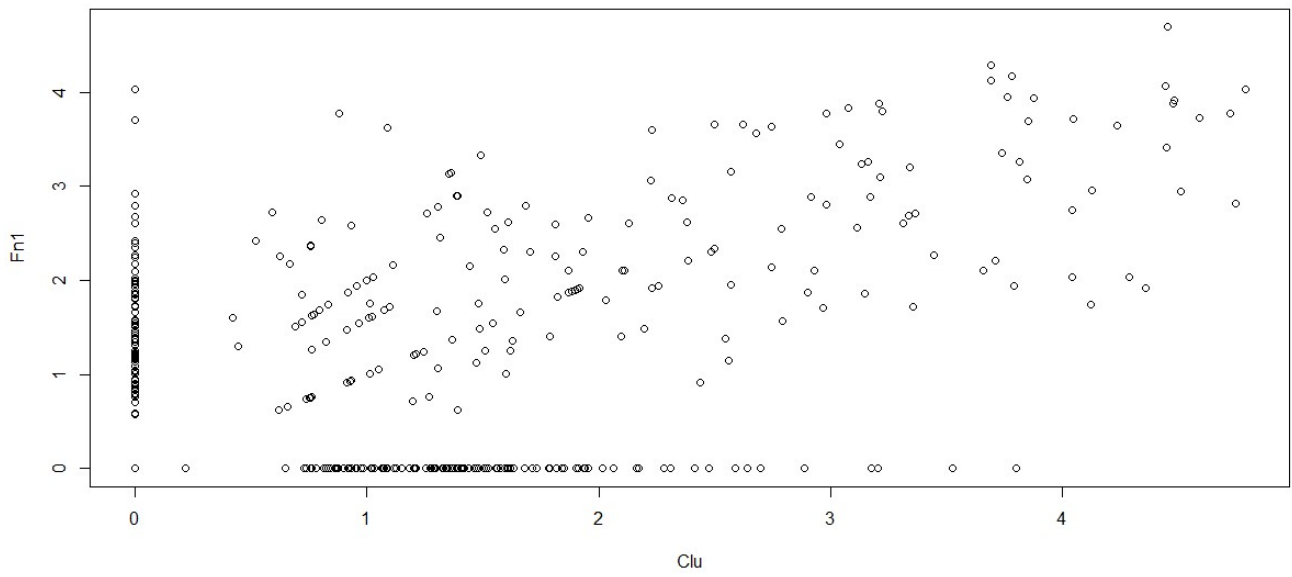|	regulatoryGene	targetGene	weight
1	Atp1a2	Fxyd5	0.5856341
2	Fn1	Clu	0.5551620
3	Clu	Fn1	0.5092166
4	Slc38a2	Slc26a2	0.4937448
5	Slc26a2	Slc38a2	0.4796618
6	Meg3	Map1b	0.4512993
7	Fn1	Igfbp6	0.4435311
8	Meg3	Snhg11	0.4396524
9	Fn1	Ildr2	0.4358745
10	Snhg11	Meg3	0.4291893
11	Ppp1r1a	Nnat	0.4135931
12	Fxyd5	Bzw1	0.4049398
13	Ppp3ca	Camk2n1	0.3903639
14	Atp1a2	Nktr	0.3799665
15	Fxyd5	Mgp	0.3775234
16	Meg3	Syt1	0.3640272
17	Atp1a2	Ppp1r1a	0.3588767
18	Alcam	Sned1	0.3584045
19	H1f0	Hist1h1c	0.3581050
20	Slc26a2	Atp1b1	0.3546995
21	2610203C20Rik	Sned1	0.3410244
22	Hist1h1c	H1f0	0.3395549
23	Fxyd5	Tspan13	0.3224870
24	Sned1	2610203C20Rik	0.3115399
25	Nnat	Ptgds	0.3110763
26	Tgfbi	Trf	0.3043820
27	Atp1a2	Igfbp5	0.2935629
28	Plp1	Mbp	0.2856158
29	Slc26a2	Rfk	0.2663311
30	Vtn	Cryab	0.2660703
31	Syt1	Ppp3ca	0.2590552
32	Ppp1r1a	Atp1a2	0.2528433
33	Alcam	Aebp1	0.2523938
34	Mgp	Rfk	0.2480098
35	Aebp1	Alcam	0.2456920
36	Syt1	Snap25	0.2341432
37	Slc26a2	Tspan13	0.2294827
38	Mgp	Thbd	0.2276632
39	Map1b	Meg3	0.2217040
40	Fbln2	Col15a1	0.2201483
41	Aebp1	Fmod	0.2156505
42	Nnat	Chchd10	0.2111303
43	Ppp1r1a	Trp53i11	0.1993194
44	Aebp1	Atp1a2	0.1987289
45	Atp1a2	Mgp	0.1938308
46	Meg3	Cmip	0.1922696
47	Pmepa1	Ctgf	0.1917491
48	Ildr2	Phldb2	0.1894471
49	Fbln2	Crispld2	0.1891432
50	Syt1	Atp2b1	0.1862272

GENIE3 network

Interaction # 1

Interaction # 2

Interaction # 3
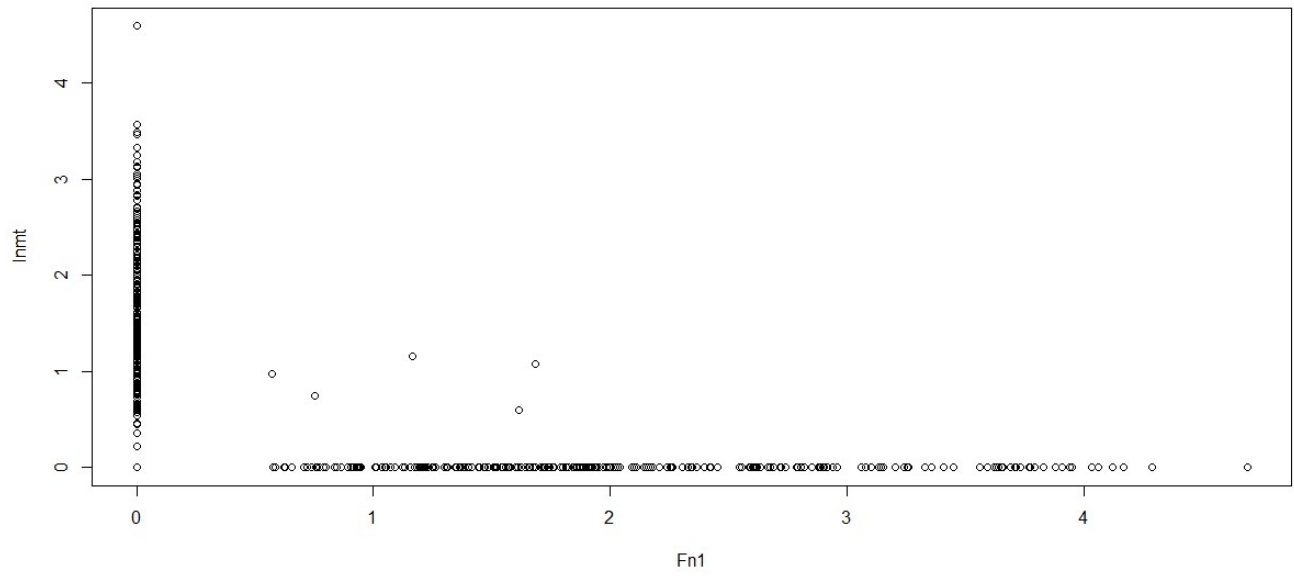
Interaction # 4

Slc26a2 (y-axis)
Slc38a2 (x-axis)

Interaction # 5

Slc38a2 (y-axis)
Slc26a2 (x-axis)

Interaction # 5700

Top 50 CLR results

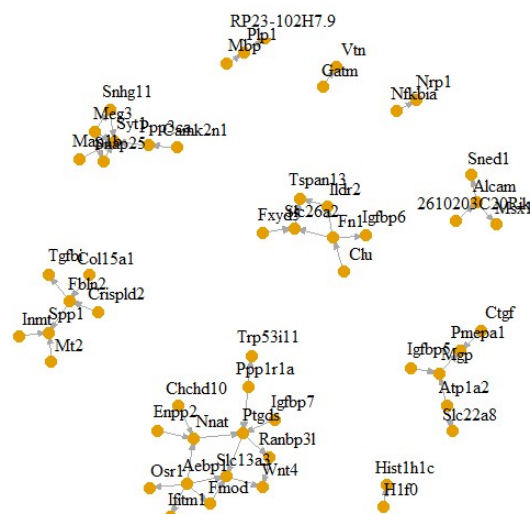5th percentile: .05 x 5700 (interaction count) = index 285
Weight value at calculated index of adjacency matrix using randomized data: 3.08077
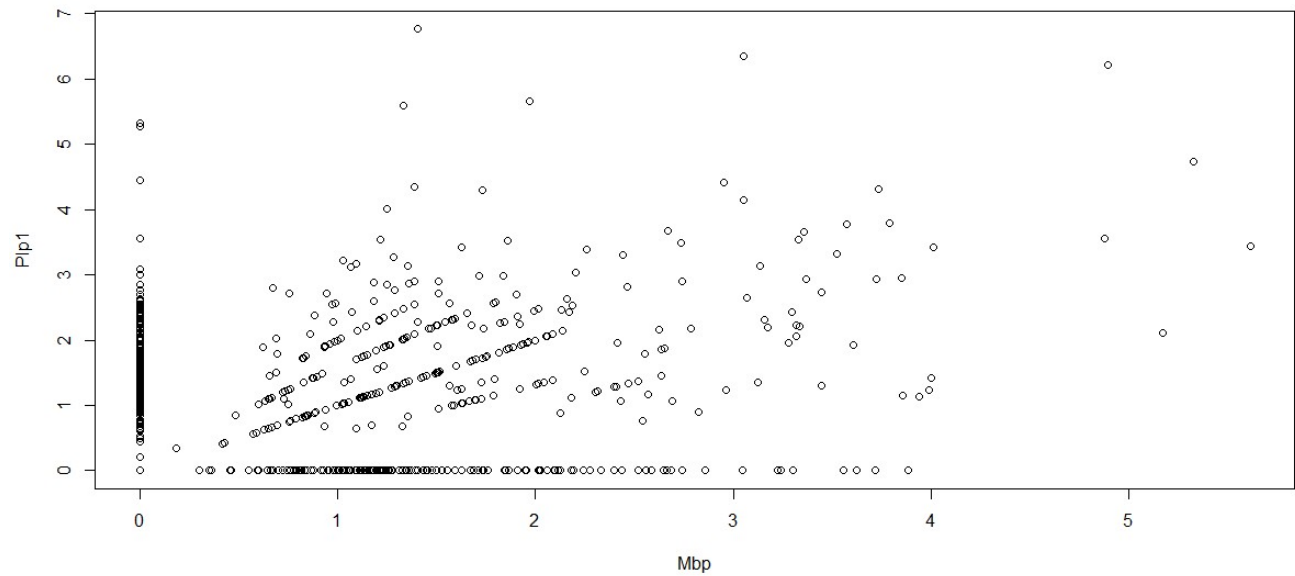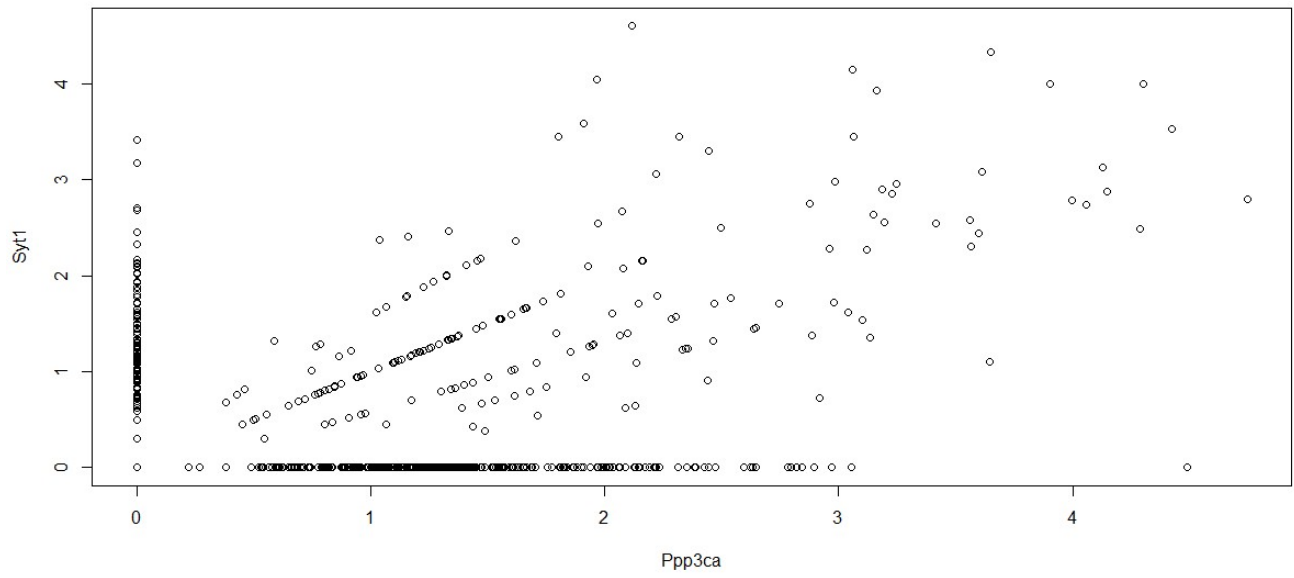Smallest index of results with weight below this threshold: 276
276 statistically significant interactions, (0.05 x 276) = 13.8 projected false positives

	regulatoryGene	targetGene	weight
1	Mbp	Plp1	9.192589
2	Ppp3ca	Syt1	5.906865
3	Mt2	Spp1	5.906381
4	Ppp1r1a	Trp53i11	5.772218
5	H1f0	Hist1h1c	5.697862
6	Mgp	Pmepa1	5.527967
7	Igfbp7	Ptgds	5.518617
8	Ptgds	Ranbp3l	5.465078
9	Fbln2	Spp1	5.087254
10	Col15a1	Fbln2	5.034457
11	Atp1a2	Slc22a8	5.032081
12	Meg3	Snap25	5.010800
13	Alcam	Sned1	5.008677
14	Aebp1	Slc13a3	5.006468
15	Map1b	Syt1	4.919211
16	Meg3	Syt1	4.862771
17	Fxyd5	Slc26a2	4.857829
18	Igfbp5	Mgp	4.845938
19	Aebp1	Fmod	4.788369
20	Aebp1	Osr1	4.767297
21	Crispld2	Fbln2	4.736851
22	Ppp1r1a	Ptgds	4.732036
23	Camk2n1	Ppp3ca	4.698981
24	Fn1	Ildr2	4.689968
25	Atp1a2	Mgp	4.649151
26	2610203C20Rik	Alcam	4.604270
27	Aebp1	Ifitm1	4.587108
28	Nfkbia	Nrp1	4.581297
29	Fn1	Igfbp6	4.573156
30	Slc26a2	Tspan13	4.558318
31	Chchd10	Nnat	4.535557
32	Gatm	Vtn	4.528097
33	Enpp2	Nnat	4.481490
34	Aebp1	Nnat	4.466160
35	Plp1	RP23-102H7.9	4.425334
36	Ptgds	Slc13a3	4.419688
37	Ctgf	Pmepa1	4.389093
38	Nnat	Ptgds	4.383726
39	Snap25	Syt1	4.354730
40	Alcam	Msx1	4.287451
41	Ranbp3l	Wnt4	4.269099
42	Inmt	Spp1	4.255102
43	Clu	Fn1	4.247694
44	Meg3	Snhg11	4.216694
45	Ildr2	Tspan13	4.196951
46	Fbln2	Tgfbi	4.150098
47	Fn1	Slc26a2	4.117716
48	Fmod	Slc13a3	4.114421
49	Snhg11	Syt1	4.095221
50	Slc13a3	Wnt4	4.085510

CLR Network

Interaction # 1

Interaction # 2

Syt1 vs Ppp3ca

Interaction # 3

Spp1 vs Mt2

Interaction # 4

Interaction # 5

Interaction # 5700