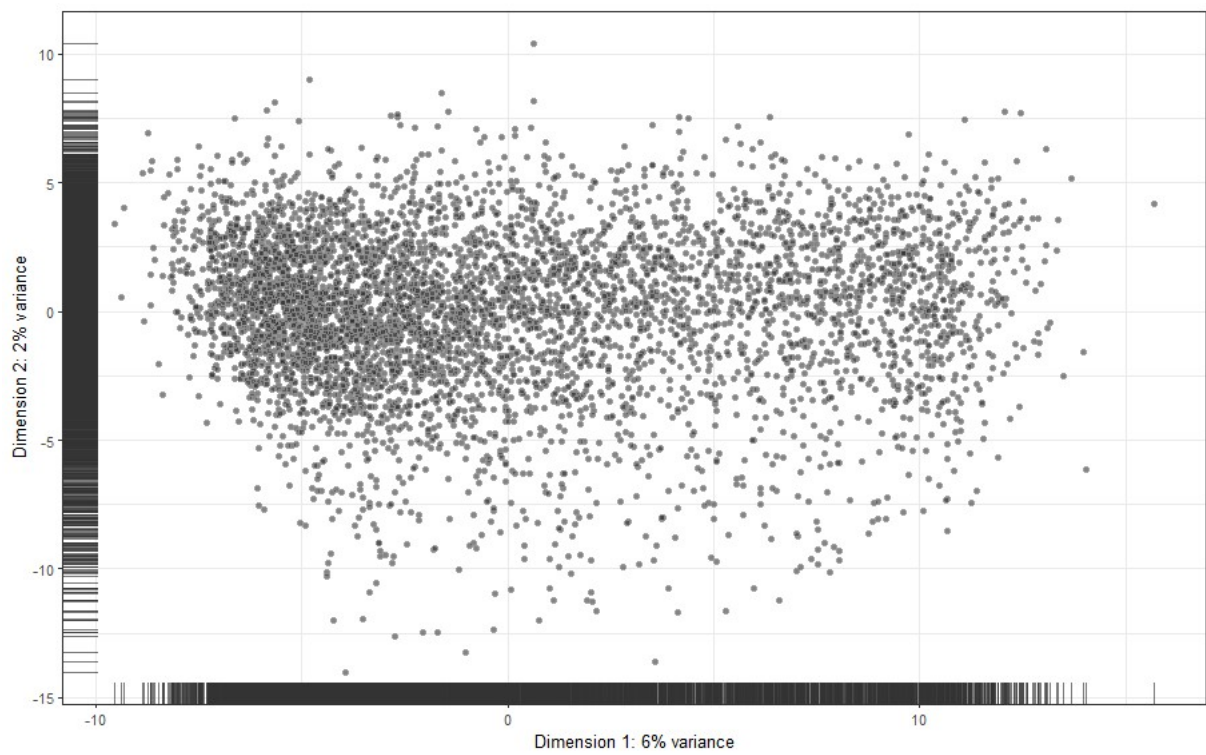# Mural PCA pre-QC
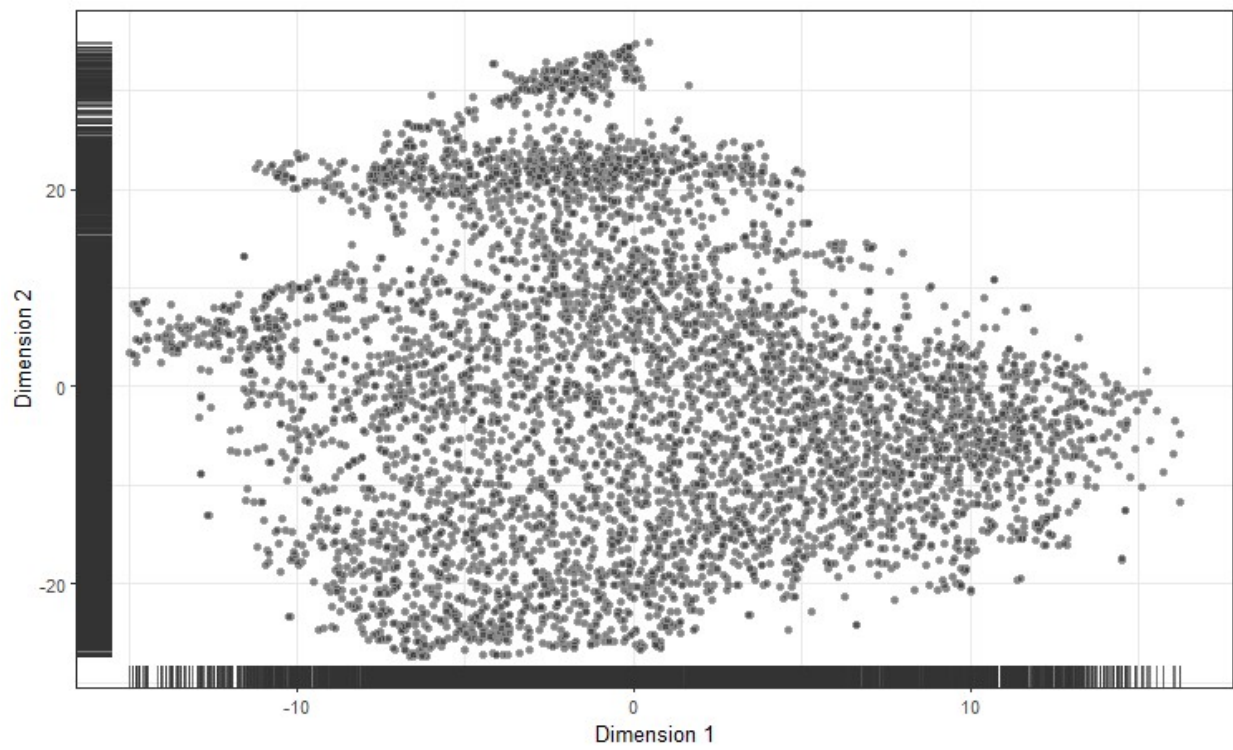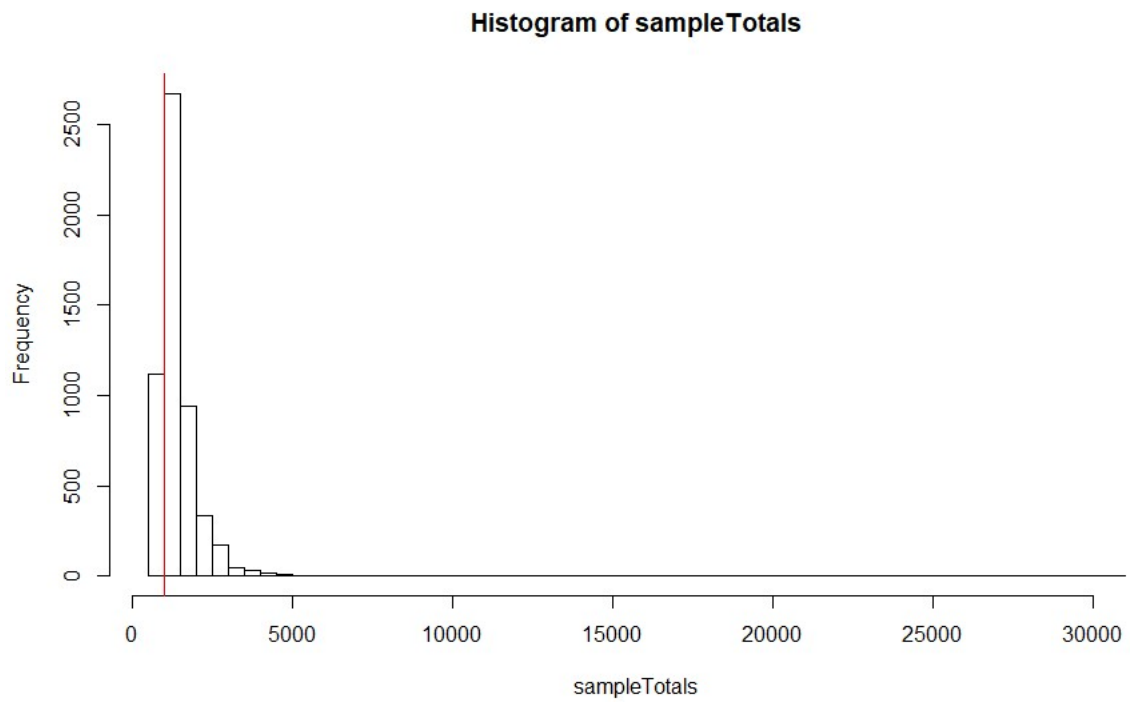

Mural TSNE pre-QC

Mural count totals, abline=1000

Histogram of sampleTotals

Mural distribution, abline=600

Histogram of originalTotals
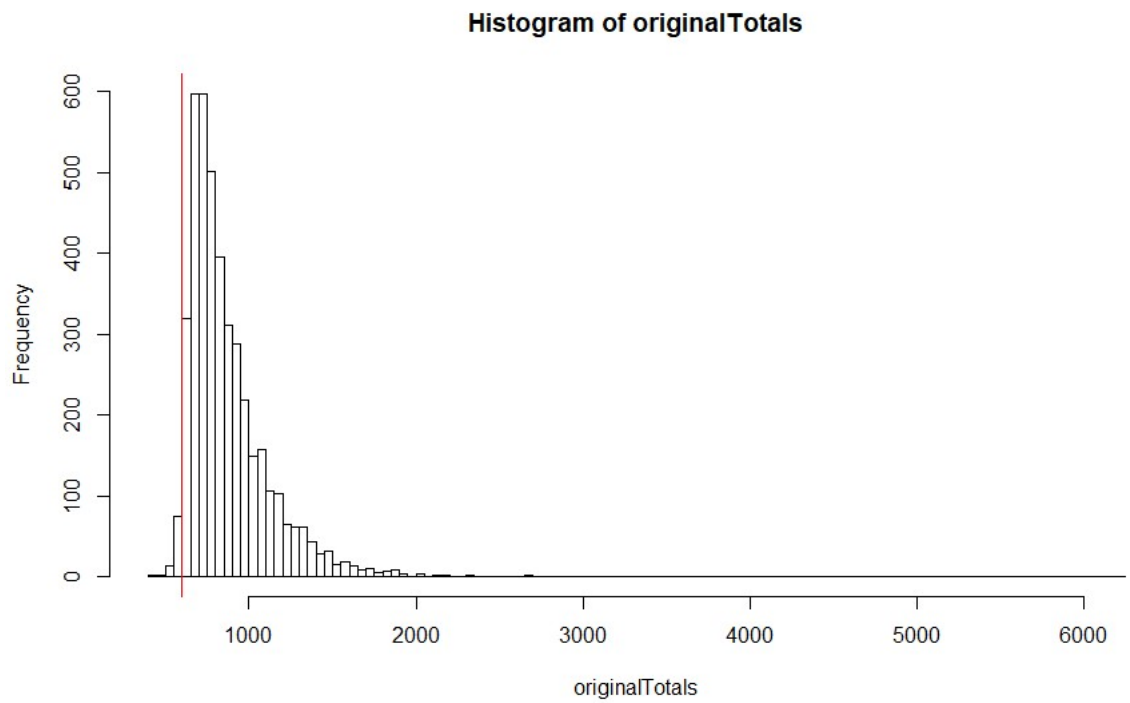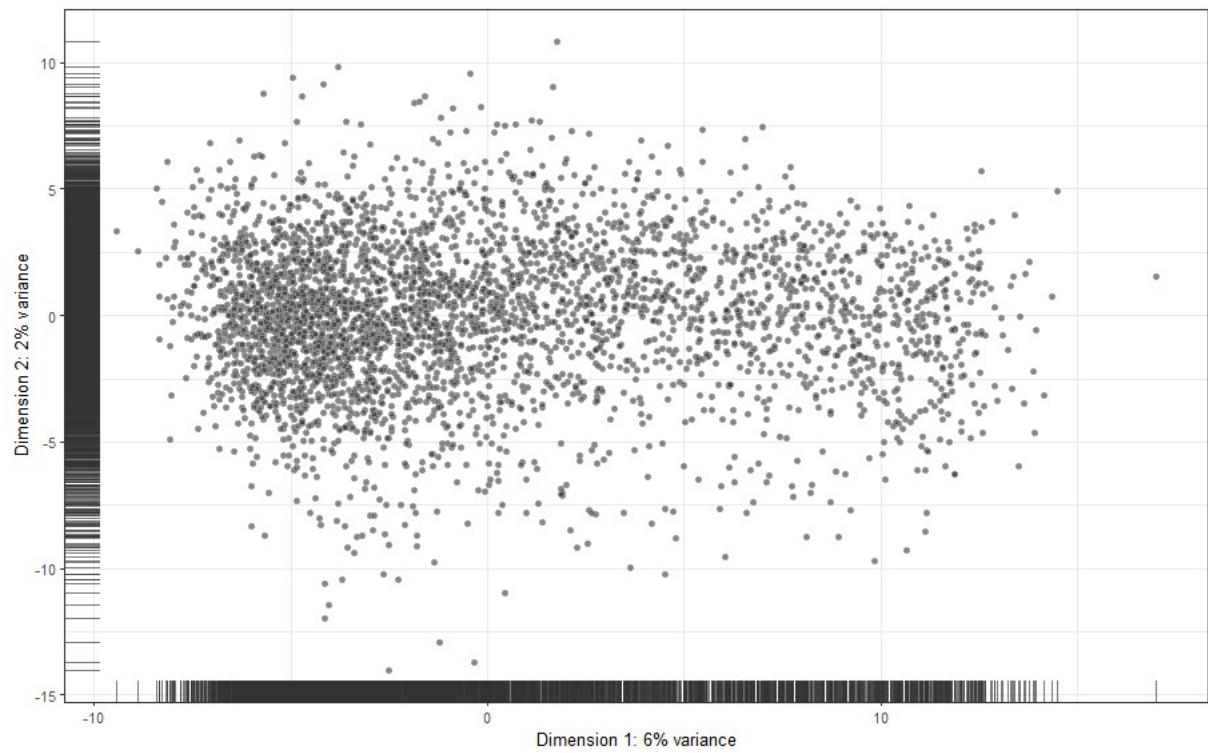
Mural PCA post-QC

Mural TSNE post-QC
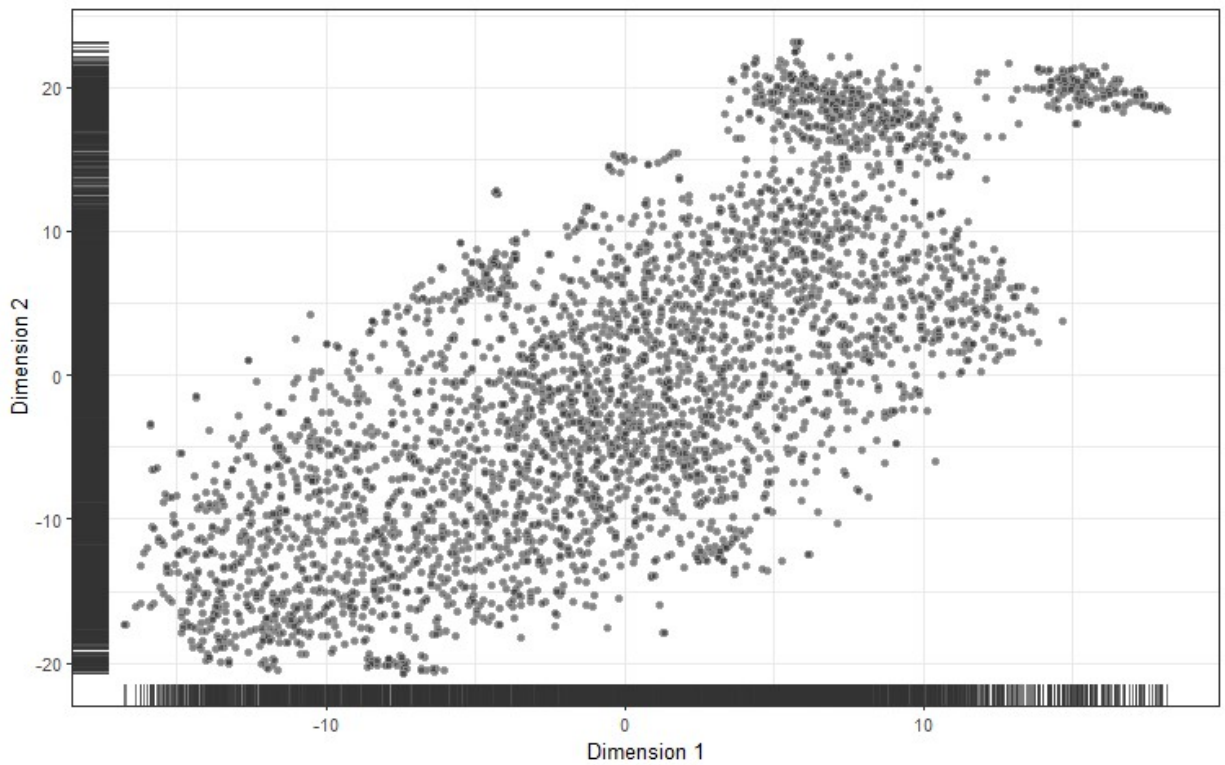
Mural PCA post cpm normalization

Mural TSNE post cpm normalization

Mural PCA post pool normalization

Mural TSNE post pool normalization

BrenneckGetVariableGenes

M3DropDifferentialExpression

Top 50 GENIE3 results

5th percentile: .05 x 7840 (interaction count) = index 392
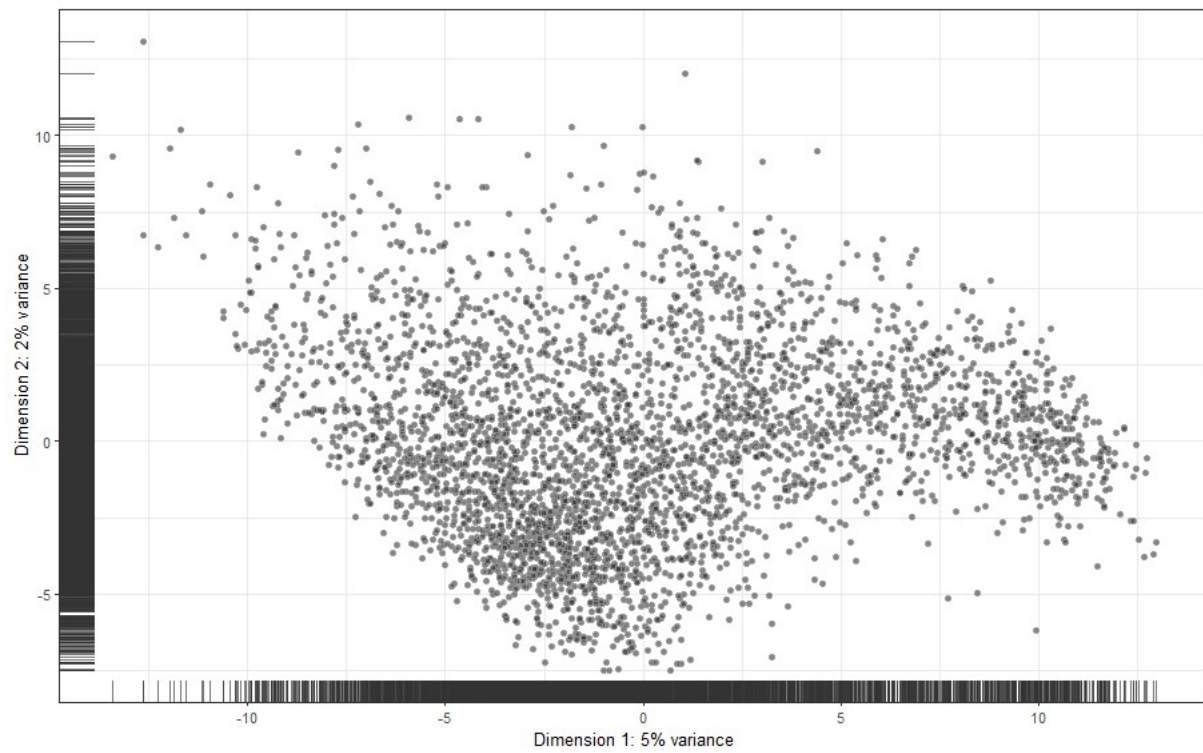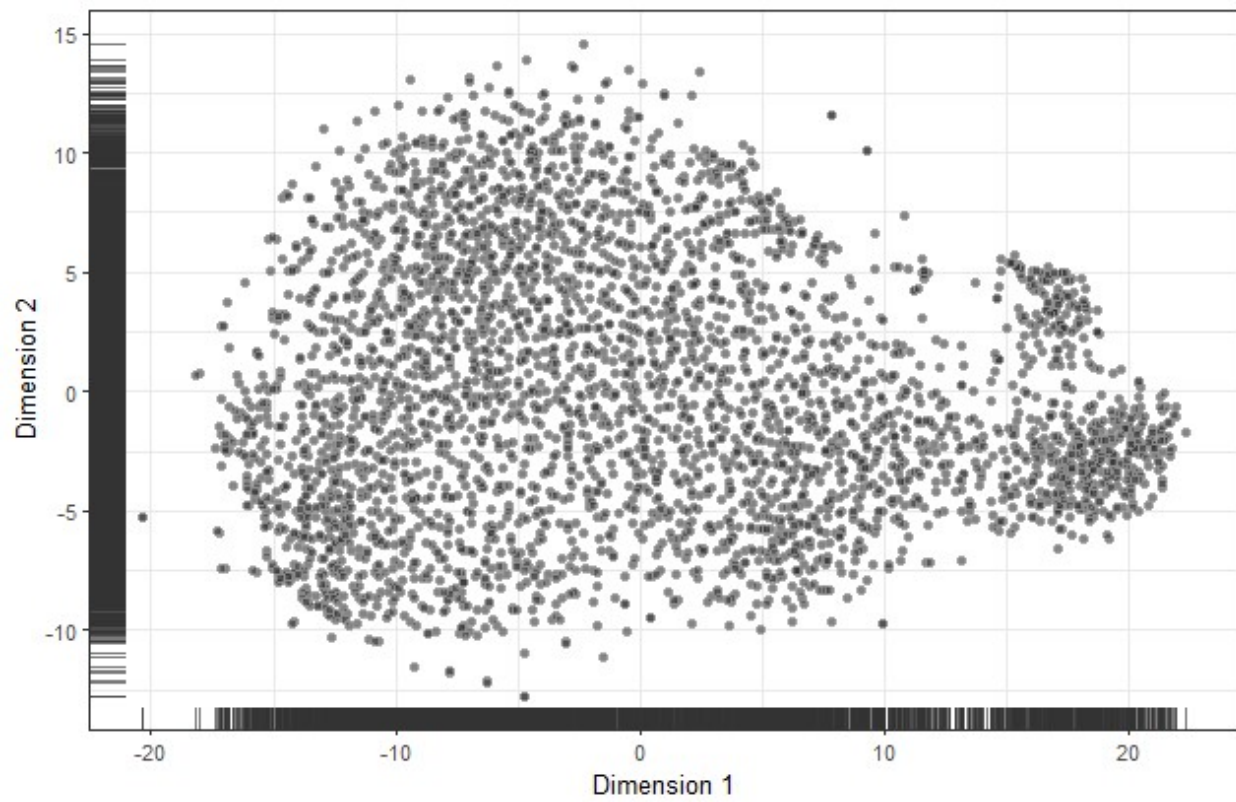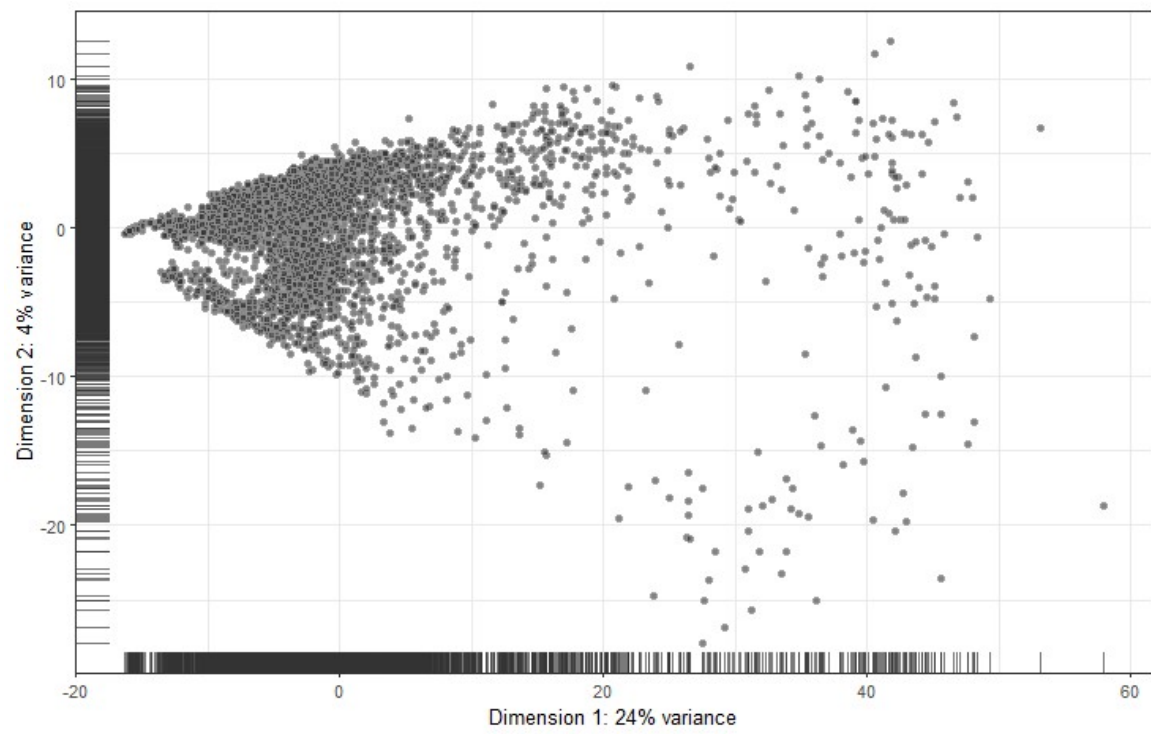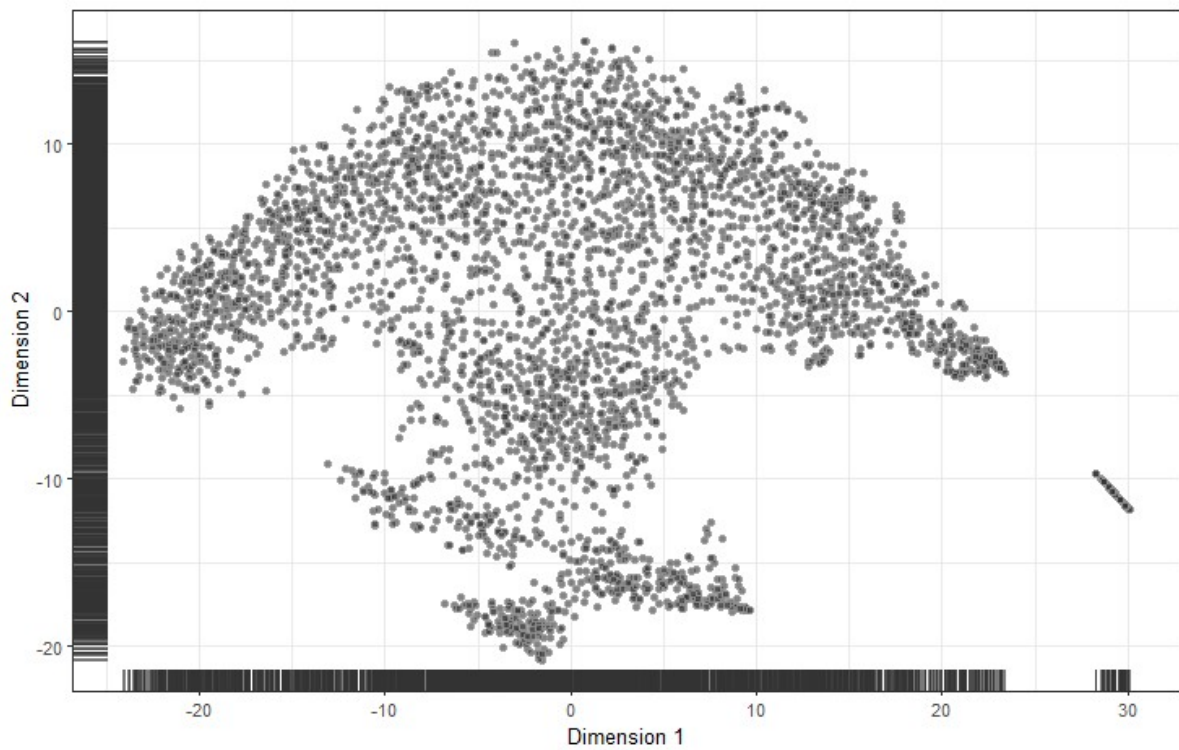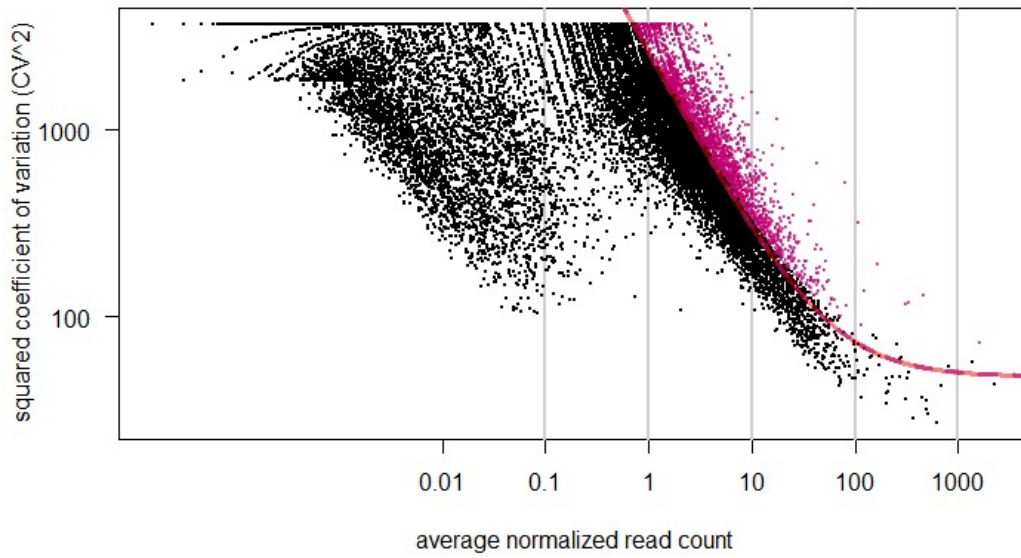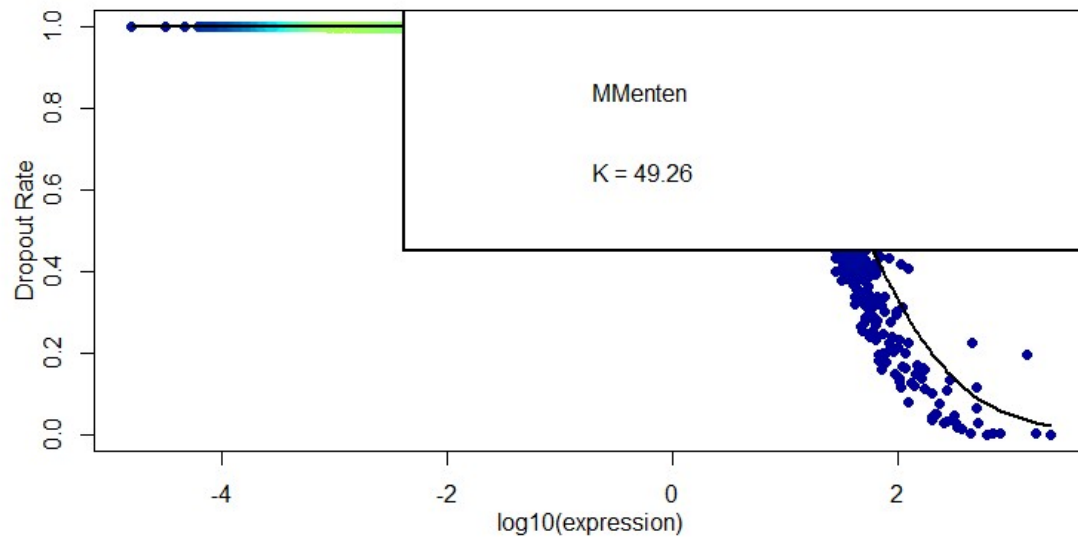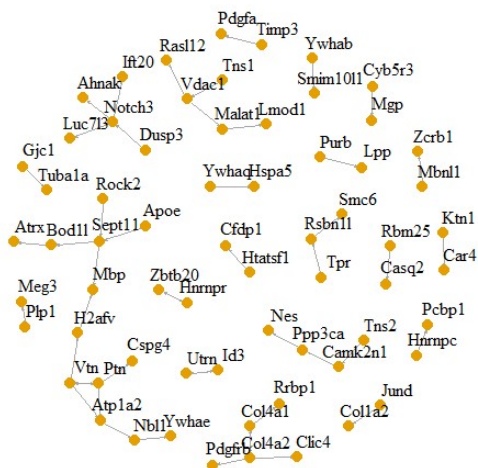Weight value at calculated index of adjacency matrix using randomized data: 0.048137
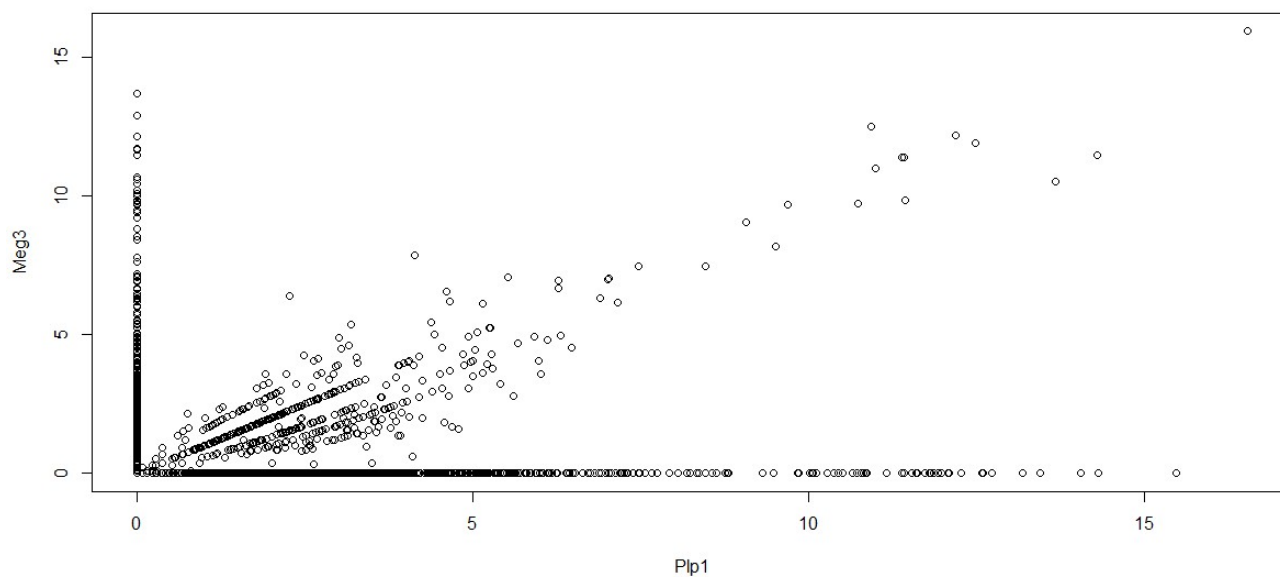Smallest index of results with weight below this threshold: 968
968 statistically significant interactions, (0.05 x 968) = 48 projected false positives

|	regulatoryGene	targetGene	weight
1	Plp1	Meg3	0.8191722
2	Vtn	Ptn	0.6760228
3	Meg3	Plp1	0.6297352
4	Col4a1	Col4a2	0.4719563
5	Col4a2	Pdgfrb	0.4614528
6	Hnrnpc	Pcbp1	0.4481079
7	Zbtb20	Hnrnpr	0.4422505
8	Ptn	Vtn	0.4346917
9	Htatsf1	Cfdp1	0.4260083
10	Notch3	Ahnak	0.4192332
11	Atp1a2	Nbl1	0.4179584
12	Col4a1	Rrbp1	0.4161589
13	Utrn	Id3	0.3607780
14	Tns2	Camk2n1	0.3585917
15	Ktn1	Car4	0.3195011
16	Camk2n1	Ppp3ca	0.3181048
17	Nbl1	Ywhae	0.3124260
18	Rock2	Sept11	0.3060304
19	Hnrnpr	Zbtb20	0.3002653
20	Vtn	Atp1a2	0.3001920
21	Ptn	Cspg4	0.2994500
22	Bod1l	Atrx	0.2842102
23	Tpr	Rsbn1l	0.2830949
24	Ppp3ca	Nes	0.2829958
25	Vdac1	Rasl12	0.2741333
26	Jund	Col1a2	0.2690780
27	Rbm25	Casq2	0.2659538
28	Col4a2	Col4a1	0.2644402
29	Ptn	Atp1a2	0.2596169
30	Gjc1	Tuba1a	0.2586253
31	Malat1	Lmod1	0.2578909
32	H2afv	Mbp	0.2559957
33	Dusp3	Notch3	0.2528272
34	Rsbn1l	Smc6	0.2515897
35	Vtn	H2afv	0.2496096
36	Ywhaq	Hspa5	0.2491345
37	Mbnl1	Zcrb1	0.2485313
38	Apoe	Sept11	0.2480877
39	Ywhab	Smim10l1	0.2470253
40	Cyb5r3	Mgp	0.2421176
41	Vdac1	Malat1	0.2309935
42	Id3	Utrn	0.2284506
43	Tns1	Vdac1	0.2274620
44	Sept11	Mbp	0.2246621
45	Sept11	Bod1l	0.2243529
46	Purb	Lpp	0.2216361
47	Notch3	Ift20	0.2215119
48	Col4a2	Clic4	0.2202517
49	Timp3	Pdgfa	0.2156976
50	Notch3	Luc7l3	0.2143463

GENIE3 Network

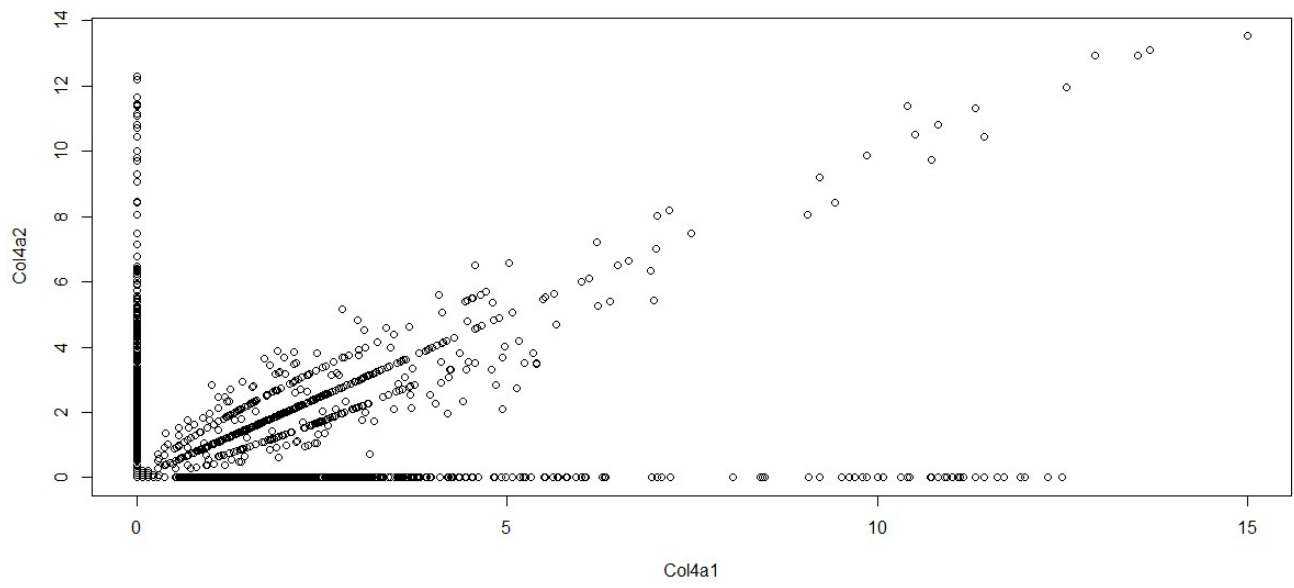## Interaction # 1
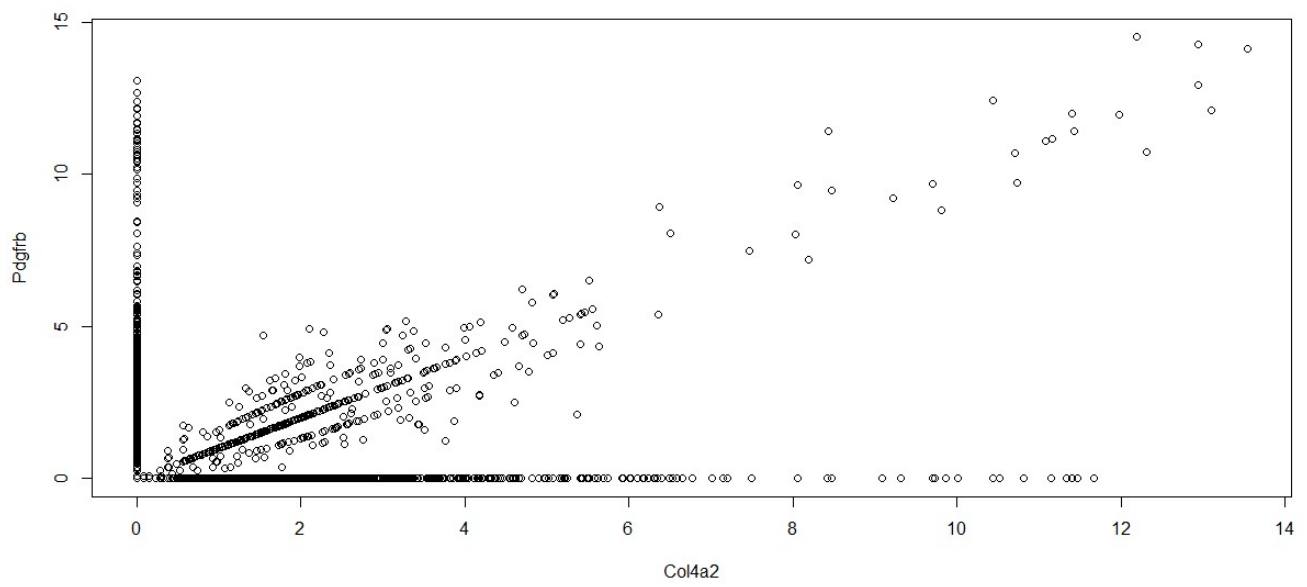
Interaction # 2
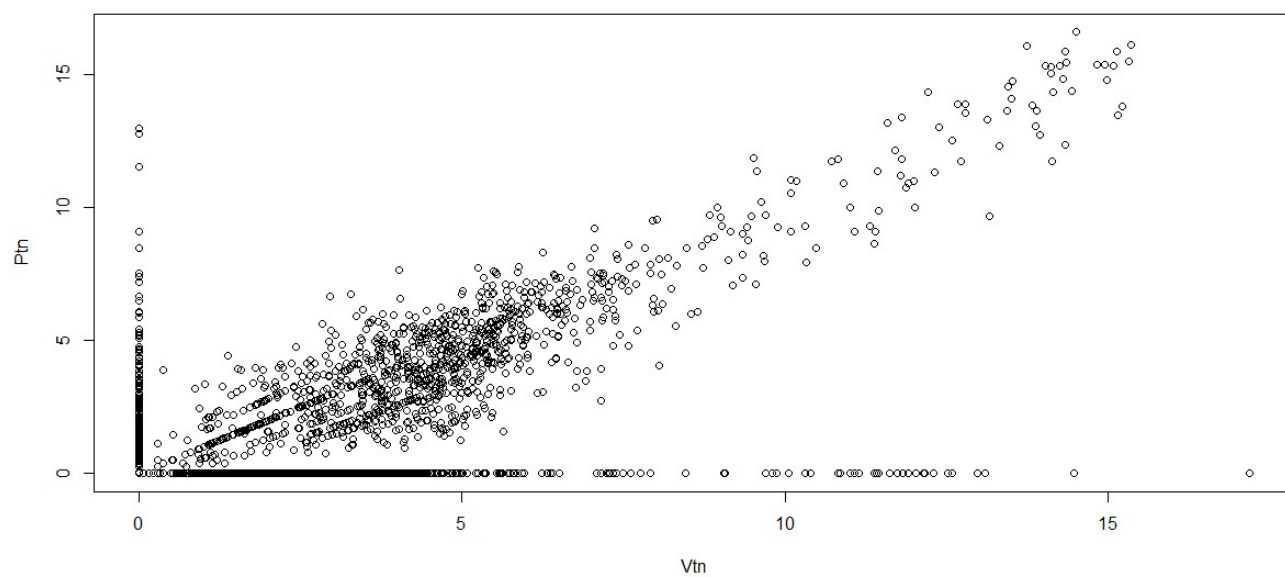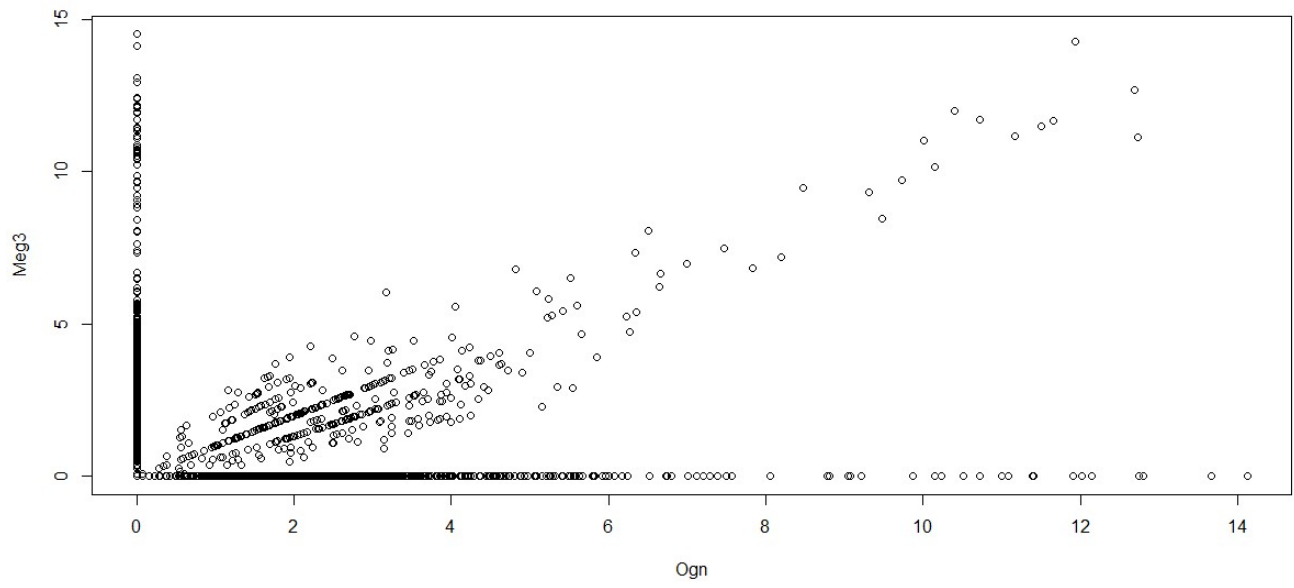
Interaction # 3
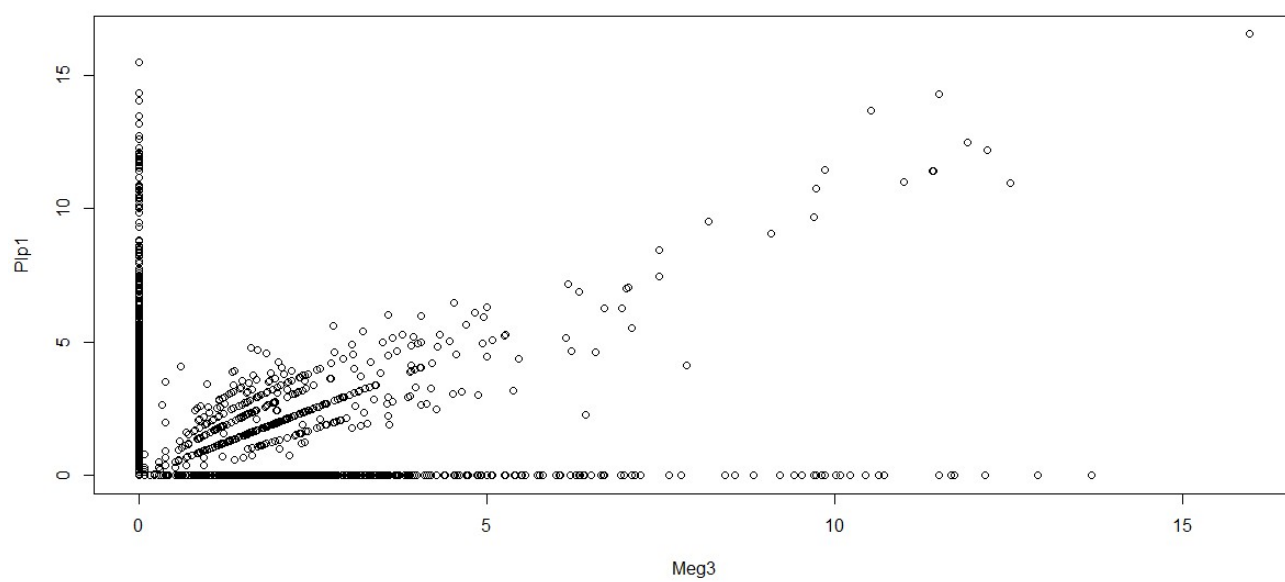
Interaction # 4

Interaction # 5

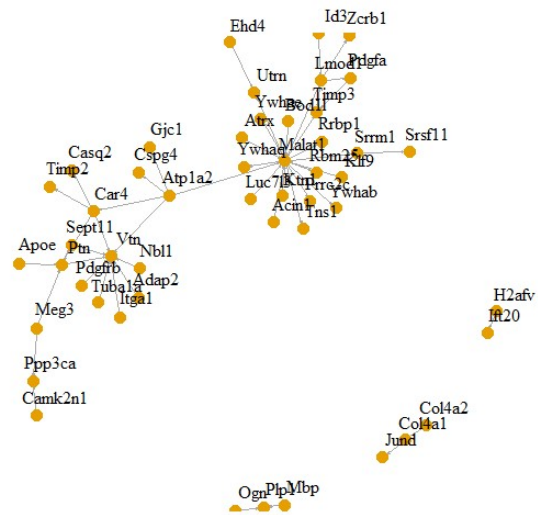**Bottom-ranked Interaction**

Top 50 CLR results

5th percentile: .05 x 7840 (interaction count) = index 392

Weight value at calculated index of adjacency matrix using randomized data: 2.992625
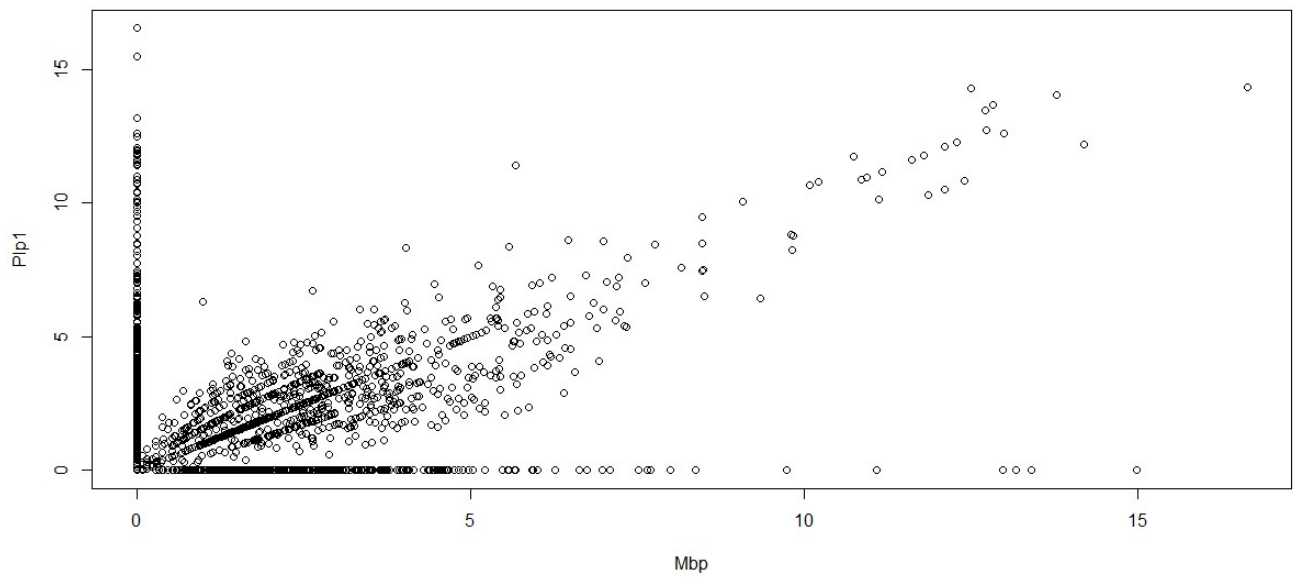
Smallest index of results with weight below this threshold: 384

384 statistically significant interactions, (0.05 x 384) = 19 projected false positives

	regulatoryGene	targetGene	weight
1	Mbp	Plp1	12.762527
2	Ptn	Vtn	9.392793
3	Malat1	Timp3	9.201936
4	H2afv	Ift20	7.829404
5	Lmod1	Timp3	7.686789
6	Atp1a2	Vtn	7.535327
7	Malat1	Rbm25	7.460625
8	Camk2n1	Ppp3ca	7.297084
9	Car4	Vtn	7.250335
10	Car4	Casq2	7.178271
11	Apoe	Ptn	7.059046
12	Malat1	Prrc2c	7.031915
13	Ktn1	Malat1	6.808046
14	Bod1l	Malat1	6.781612
15	Id3	Lmod1	6.746043
16	Malat1	Rrbp1	6.605718
17	Malat1	Utrn	6.431690
18	Col4a1	Col4a2	6.427722
19	Nbl1	Vtn	6.393274
20	Atp1a2	Cspg4	6.171926
21	Malat1	Srrm1	6.058367
22	Col4a1	Jund	6.021022
23	Tuba1a	Vtn	5.948652
24	Pdgfrb	Vtn	5.915372
25	Lmod1	Zcrb1	5.744626
26	Car4	Timp2	5.655814
27	Pdgfa	Timp3	5.648779
28	Sept11	Vtn	5.600639
29	Atp1a2	Malat1	5.584191
30	Klf9	Malat1	5.544801
31	Ptn	Sept11	5.537490
32	Atrx	Malat1	5.514167
33	Adap2	Vtn	5.495996
34	Malat1	Ywhae	5.375814
35	Acin1	Malat1	5.338129
36	Malat1	Ywhaq	5.288286
37	Car4	Ptn	5.243530
38	Srrm1	Srsf11	5.233250
39	Ogn	Plp1	5.200362
40	Malat1	Ywhab	5.199331
41	Luc7l3	Malat1	5.148740
42	Ehd4	Utrn	5.136840
43	Lmod1	Pdgfa	5.124046
44	Lmod1	Malat1	5.122307
45	Atp1a2	Gjc1	5.099621
46	Atp1a2	Car4	5.043638
47	Malat1	Tns1	4.987473
48	Meg3	Ppp3ca	4.959389
49	Meg3	Ptn	4.946855
50	Itga1	Vtn	4.940292

Ehd4 Id3 Zcrb1

Lmod Prlgfa

Utrn Timp3

Ywhae Bod11

Atrx Rrbp1

Gjc1 Malar1 Srrm1 Srsf11

Casq2 Cspg4 Ywhae Rbm25 Klf9

Timp2 Atp1a2 Luc7l Ktrp Prre2c Ywhab

Car4 Acin1 Ins1

Sept11 Vtn

Apoe Ptn Nbl1

Pdgfrb Adap2

Tuba1a Itga1

Meg3

H2afv

Ift20

Ppp3ca

Camk2n1 Col4a2

Col4a1

Jund

Ogn Plp Mbp

Interaction # 1

Plp1

Mbp

Bottom-ranked Interaction