

the inputted 362 genes,
266 genes exist in the brain cell type expression dataset, 96 genes do not, which are:
CHL2,SLC25A11,C1RL,NAPSB,LYZ,SP110,NABP1,HLA-DPB1,ANSE3,RNASE2,CLIC1,C17A,TM22,SIGLEC10,SERPINB1,MS4A4A,SLC6A3,SYK,ARPC1B,SECTM1,EFL1,ADGRG5,TLR5,CD300C,CD300E,SP140,C2ORF73,LIILRB1,LIILRB2,LIILRB1,HCP5,C1ORF54,C19ORF38,FCN1,TFEC,VNN2,GBP5,GPRI141,C17ORF64,TAGAP,BCL2A1,DHRS9,SIRPB,MS4A14,NCF2,ACP3,TLR10,PTAFR,RNASET2,NIBAN1,SPH1,TASL,CEACAM21,IFI16,TNFRSF6B,C1ORF162,C5ORF58,C16ORF54,TMEM156,APOBEC3B,PSMB8-AS1,HLA-DOA,HLA-DPA1,LPAR5,FCGR3A,HILPDA,ADGRE2,ARL11,LRRC25,RPL30,NLRC4,BIN2,SERPINA1,HLA-DRA,SERPINA3,TMIGD2,MNDA,APOL4,NGT2,PHYKPL,TLDC2,FCGR2A,MS4A6A,C1R,SIGLEC7,OTULIN,LIILRA2,NAMPTP1,TYMP,SIGLEC8,SIGLEC9,PCLAF,LIILRA5,HLA-DMB,HLA-DQA2,HLA-DMA

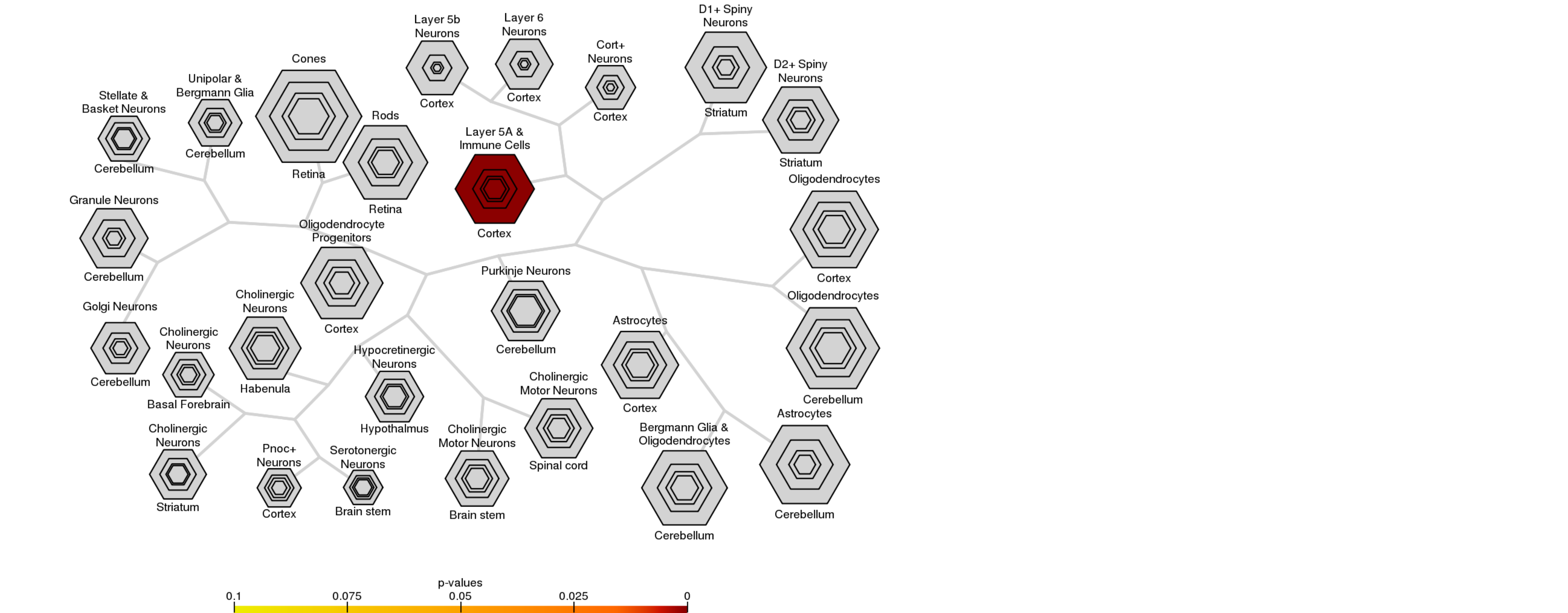
Interpretation of CSEA results table:

The first row lists the pSI thresholds, and the first column lists the brain cell types

The values in the tables are the Fisher's Exact p-values, followed by the Benjamini-Hochberg (BH) corrected values in parentheses.

Click the linked p-values to see the overlapped genes for the corresponding brain cell types and thresholds.

Brain Cell Types and P-Values	0.05	0.01	0.001	0.0001
RetR.Rods	0.668 (0.982)	0.662 (1.000)	0.570 (1.000)	0.412 (1.000)
Hyp	0.864 (0.982)	0.334 (1.000)	0.394 (1.000)	1.000 (1.000)
Hyp.Hcrt	0.772 (0.982)	0.917 (1.000)	0.718 (1.000)	1.000 (1.000)
BF	0.481 (0.982)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)
BF.Chat	0.776 (0.982)	0.535 (1.000)	1.000 (1.000)	1.000 (1.000)
BS	0.178 (0.982)	0.181 (1.000)	0.131 (0.790)	1.000 (1.000)
BS.Chat	0.279 (0.982)	0.329 (1.000)	0.755 (1.000)	0.552 (1.000)
BS.Slc6a4	0.912 (0.982)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)
Cb	0.977 (0.982)	0.733 (1.000)	0.181 (0.790)	1.000 (1.000)
Cb.Septin4	0.585 (0.982)	0.316 (1.000)	0.382 (1.000)	0.298 (1.000)
Cb.Pcp2	0.854 (0.982)	0.887 (1.000)	1.000 (1.000)	1.000 (1.000)
Cb.Neurod1	0.978 (0.982)	0.795 (1.000)	0.580 (1.000)	0.303 (1.000)
Cb.Lydp6	0.784 (0.982)	0.614 (1.000)	0.261 (1.000)	0.166 (1.000)
Cb.Grp	0.153 (0.982)	0.505 (1.000)	1.000 (1.000)	1.000 (1.000)
Cb.Grm2	0.973 (0.982)	0.547 (1.000)	1.000 (1.000)	1.000 (1.000)
Cb.Fthfd	0.714 (0.982)	0.551 (1.000)	1.000 (1.000)	1.000 (1.000)
Cb.Cnp	0.867 (0.982)	0.903 (1.000)	0.971 (1.000)	0.875 (1.000)
Cpu	0.586 (0.982)	0.700 (1.000)	1.000 (1.000)	1.000 (1.000)
Cpu.D2	0.981 (0.982)	0.647 (1.000)	0.370 (1.000)	0.473 (1.000)
Cpu.D1	0.977 (0.982)	0.670 (1.000)	1.000 (1.000)	1.000 (1.000)
Cpu.Chat	0.878 (0.982)	0.874 (1.000)	1.000 (1.000)	1.000 (1.000)
Ctx	0.808 (0.982)	0.524 (1.000)	1.000 (1.000)	1.000 (1.000)
Ctx.Pdgfradj340	0.708 (0.982)	0.143 (1.000)	0.152 (0.790)	0.230 (1.000)
Ctx.Elv1_ts88	5.988e-12 (2.446e-10)	2.753e-14 (9.637e-13)	3.563e-10 (1.247e-08)	8.173e-11 (2.861e-09)
Ctx.Pnoc	0.951 (0.982)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)
Ctx.Nlsr	0.889 (0.982)	0.370 (1.000)	0.026 (0.308)	0.113 (0.990)
Ctx.Gli25d2	0.385 (0.982)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)
Ctx.Fthfd	0.434 (0.982)	0.458 (1.000)	1.000 (1.000)	1.000 (1.000)
Ctx.Cort	0.982 (0.982)	0.672 (1.000)	1.000 (1.000)	1.000 (1.000)
Ctx.Cnp	0.982 (0.982)	0.998 (1.000)	1.000 (1.000)	1.000 (1.000)
Epi	0.831 (0.982)	1.000 (1.000)	1.000 (1.000)	1.000 (1.000)
Epi.Chat	0.898 (0.982)	0.441 (1.000)	0.346 (1.000)	0.755 (1.000)
Spc	0.275 (0.982)	0.013 (0.220)	0.025 (0.308)	0.106 (0.990)
Spc.Chat	0.847 (0.982)	0.351 (1.000)	0.176 (0.790)	0.034 (0.595)
RetC.Cones	0.549 (0.982)	0.199 (1.000)	0.063 (0.554)	0.478 (1.000)



The overlapped genes for every cell type (pSI threshold 0.05) are:

RetR.Rods : S4GALT1, EHD4, CXCL16, MYD88, RTE11, SLC26A2, TNFAIP3, HCLS1, SUSO3, RHBDP2

Hyp : C1QC, SELPLG, RNASE6

Hyp.Hcrt : SLPI, PIK3R5, UCP2, CASP1

BF : LY86, FCER1G, C1QA, CD163, CD68

BF.Chat : SLPI, RGS10, LST1

BS : FCER1G, OLFML3, TAL1, IGFBP2, C1QB, LY86, C3

BS.Chat : CLIC1, BIRC5, CSRP2, EMB, TNFSF13B, LCP1, PIK3R5, C3

BS.Slc6a4 : LST1

Cb : SLA, RPS6KA1, RTE11, PIK3R3, LYN

Cb.Septin4 : B2M, CH13L1, B4GALT1, VAMP8, CMTM3, CLIC1, CASP1, HK2, CYBA, UCP2, HCK

Cb.Pcp2 : ARHGAP15, ALOX5AP, RTE11, LCP1, F11R

Cb.Neurod1 : RPS6KA1, UNC13D, VAMP8

Cb.Lydp6 : CMTM7, SLA, PLVAP

Cb.Grp : CH13L1, VAMP8, CMTM3, CLIC1, CASP1, HK2, UCP2

Cb.Fthfd : B2M, CH13L1, PTGS1, VAMP8, CMTM3, LHFPL2, HK2, CYBA, UCP2, IFI30, CASP1

Cb.Cnp : SLPI, LAP3, ST6GAL1, PSTPIP2, IL18, LHFPL2, ARHGAP15, RPS6KA1, CTSC, MTHFD2

Cpu : SELPLG, AIF1, C1QB, C1QA, ARHGDIB

Cpu.D2 : CD4, CISH, AIF1, ARHGDIB, CD68

Cpu.Chat : RGS10, LST1, CASP1

Cx : ARHGAP15, ARHGAP25, BLNK

Ctx.Pdgfradj340 : RAB32, ST6GAL1, CMTM3, ASF1B, NUSAP1, MYD88, CDK1, CDK2, ETV6

Ctx.Elv1_ts88 : PTPN6, BLNK, AIF1, CYTH4, TBXAS1, ITGB2, IRF8, ADAP2, PTGS1, GMFG, HK3, FERMT3, STAB1, IGFBP2, CYBA, CTSS, NCKAP1L, CD14, LYVE1, CTSC, RAB32, FCER1G, F13A1, INPP5D, CD163, LY86, SLC11A1, CD68, CSF1R, LAPTMS, TNFAIP8L2, C1QC, C1QB, C1QA, ARHGDIB, MS4A7

Ctx.Pnoc : LST1

Ctx.Nlsr : CSF1R, ARHGAP25, BLNK

Ctx.Gli25d2 : BLNK, ARHGAP25, CSF1R, GBP2, ITGB2, TNFAIP3, LRG1

Ctx.Fthfd : CH13L1, VAMP8, CMTM3, MYD88, IL18, F11R, IGFBP2, ABCC4, VNN1, DAPP1

Ctx.Cort : PTGS1, MAFB

Ctx.Cnp : LAP3, ST6GAL1, LCP1, RPS6KA1, CTSC, MTHFD2

Epi : CMTM7, C1QC, FCER1G, TAL1

Epi.Chat : NFAM1, PSMB8, DOCK2, C1QA, PSMB9

Spc : S100A9, OLFML3, PTPRC, S100A8, CSF1R, TNFSF13B, TMEM119, C1QB, CTSS, LY86, SELPLG, ABCC4, C3

Spc.Chat : TNFSF13B, PIK3R5, LCP1, CF1, MTHFD2

RetC.Cones : MALT1, SAMSN1, LYVE1, NAGA, OLFML3, SLC1A7, HK2, LMNB1, NFKB1, LHFPL2, PRAM1, C1QA, ARHGDIB, AB13, CTSC, PIK3AP1, GPSM3

The overlapped genes for every cell type (pSI threshold 0.01) are:

RetR.Rods : SUSO3, S4GALT1, SLC26A2, TNFAIP3

Hyp : SELPLG, RNASE6

Hyp.Hcrt : CASP1

BF : none

BF.Chat : RGS10, LST1

BS : LY86, TAL1

BS.Chat : TNFSF13B, LCP1, CLIC1, CSRP2

BS.Slc6a4 : none

BS.Slc6a4 : none

Cb : SLA, RPS6KA1

Cb.Septin4 : CH13L1, CMTM3, CASP1, HK2, CYBA, UCP2

Cb.Pcp2 : ALOX5AP, RTE11

Cb.Neurod1 : RPS6KA1, UNC13D

Cb.Lydp6 : CMTM7, SLA

Cb.Grp : HK2, UCP2

Cb.Grm2 : PRR34, F11R

Cb.Fthfd : CMTM3, CH13L1, CYBA, HK2, VAMP8

Cb.Cnp : LAP3, ARHGAP15, ST6GAL1, CTSC

Cpu : ARHGDIB

Cpu.D2 : CD4, CISH, ARHGDIB

Cpu.D1 : CD4, AIF1, ARHGDIB

Cpu.Chat : LST1

Cx : ARHGAP25

Ctx.Pdgfradj340 : RAB32, CMTM3, ASF1B, NUSAP1, CDK1, CDK2, ETV6

Ctx.Elv1_ts88 : PTPN6, CYTH4, ITGB2, PTGS1, FERMT3, STAB1, IGFBP2, CYBA, CD14, LYVE1, RAB32, FCER1G, F13A1, CD163, SLC11A1, CD68, CSF1R, LAPTMS, TNFAIP8L2, C1QC, C1QB, C1QA, MS4A7

Ctx.Pnoc : none

Ctx.Nlsr : ARHGAP25, BLNK

Ctx.Gli25d2 : none

Ctx.Fthfd : CMTM3, CH13L1, IGFBP2, MYD88, DAPP1

Ctx.Cort : MAFB

Ctx.Cnp : LAP3

Epi : none

Epi.Chat : NFAM1, PSMB9, DOCK2, PSMB8

Spc : S100A8, PTPRC, S100A9, CSF1R, TMEM119, CTSS, LY86, C3

Spc.Chat : TNFSF13B, PIK3R5, LCP1, CF1

RetC.Cones : MALT1, SAMSN1, LYVE1, SLC1A7, HK2, LMNB1, PRAM1, ARHGDIB, AB13, PIK3AP1, GPSM3

The overlapped genes for every cell type (pSI threshold 0.001) are:

RetR.Rods : SUSO3, TNFAIP3

Hyp : RNASE6

Hyp.Hcrt : CASP1

BF : none

BF.Chat : none

BS : TAL1

BS.Chat : LCP1

BS.Slc6a4 : none

Cb : SLA, RPS6KA1

Cb.Septin4 : HK2, CH13L1, UCP2

Cb.Pcp2 : none

Cb.Neurod1 : RPS6KA1

Cb.Lydp6 : SLA, CMTM7

Cb.Grp : none

Cb.Grm2 : none

Cb.Fthfd : none

Cb.Cnp : CTSC

Cpu : none

Cpu.D2 : CD4, ARHGDIB

Cpu.D1 : none

Cpu.Chat : none

Cx : none

Ctx.Pdgfradj340 : RAB32, NUSAP1, CDK1, CDK2

Ctx.Elv1_ts88 : PTPN6, F13A1, CSF1R, STAB1, CYTH4, C1QC, C1QB, C1QA, CD163, CD14, LYVE1, MS4A7

Ctx.Pnoc : none

Ctx.Nlsr : ARHGAP25, BLNK

Ctx.Gli25d2 : none

Ctx.Fthfd : none

Ctx.Cort : none

Ctx.Cnp : none

Epi : none

Epi.Chat : PSMB9, NFAM1, DOCK2

Spc : PTPRC, S100A8, LY86, C3

Spc.Chat : TNFSF13B, LCP1, CF1

RetC.Cones : MALT1, SAMSN1, SLC1A7, HK2, LMNB1, ARHGDIB, PIK3AP1, GPSM3

The overlapped genes for every cell type (pSI threshold 0.0001) are:

RetR.Rods : SUSO3, TNFAIP3

Hyp : none

Hyp.Hcrt : none

BF : none

BF.Chat : none

BS : none

BS.Chat : LCP1

BS.Slc6a4 : none

Cb : none

Cb.Septin4 : HK2, UCP2

Cb.Pcp2 : none

Cb.Neurod1 : RPS6KA1

Cb.Lydp6 : SLA, CMTM7

Cb.Grp : none

Cb.Grm2 : none

Cb.Fthfd : none

Cb.Cnp : CTSC

Cpu : none

Cpu.D2 : CD4

Cpu.D1 : none

Cpu.Chat : none

Cx : none

Ctx.Pdgfradj340 : RAB32, NUSAP1

Ctx.Elv1_ts88 : PTPN6, F13A1, CSF1R, STAB1, CYTH4, C1QC, C1QB, C1QA, CD163, CD14, MS4A7

Ctx.Pnoc : none

Ctx.Nlsr : ARHGAP25

Ctx.Gli25d2 : none

Ctx.Fthfd : none

Ctx.Cort : none

Ctx.Cnp : none

Epi : none

Epi.Chat : NFAM1

Spc : S100A8, C3

Spc.Chat : TNFSF13B, LCP1, CF1

RetC.Cones : SAMSN1, PIK3AP1, SLC1A7