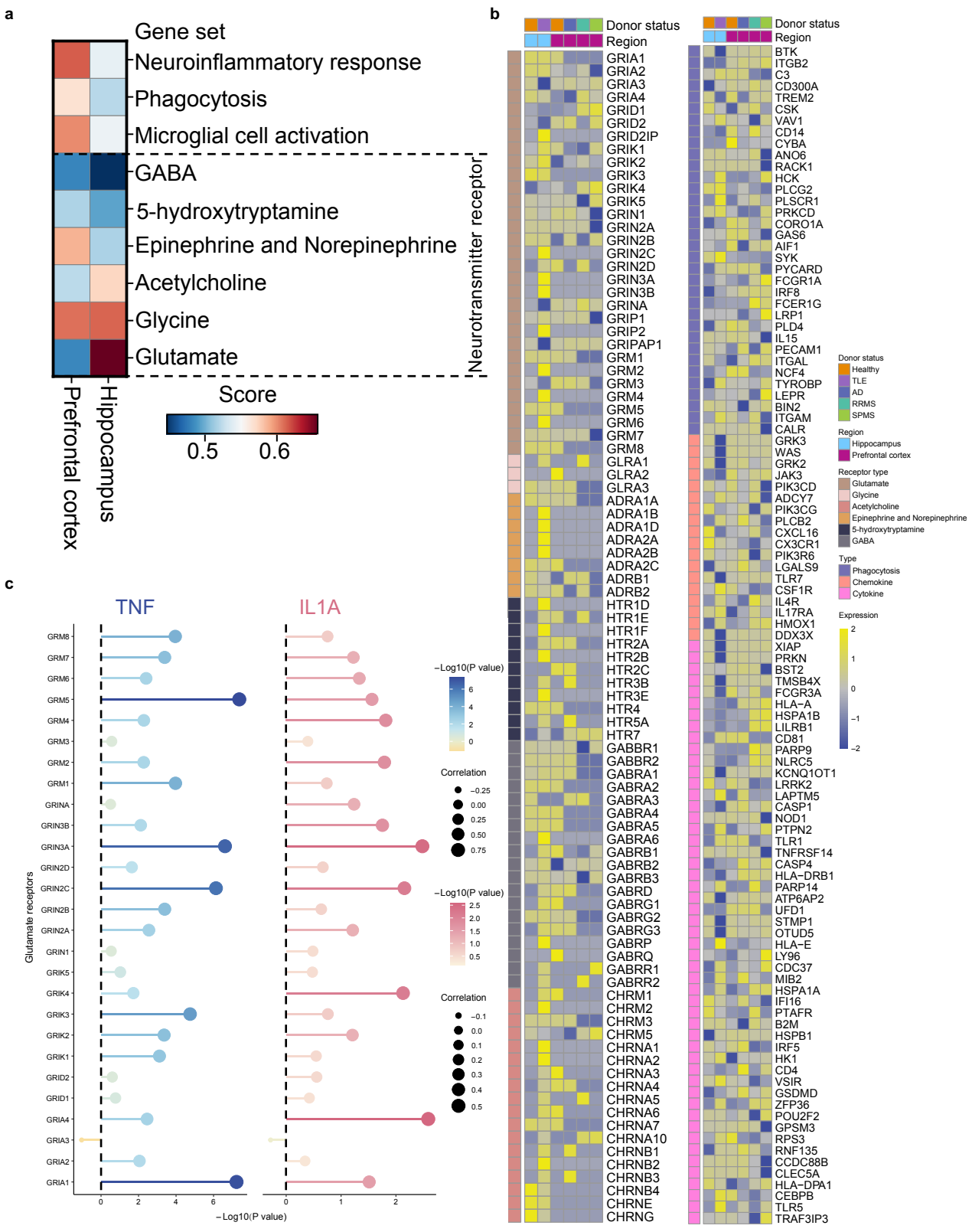
a
Gene set
Neuroinflammatory response
Phagocytosis
Microglial cell activation
GABA
5-hydroxytryptamine
Epinephrine and Norepinephrine
Acetylcholine
Glycine
Glutamate
Neurotransmitter receptor
Prefrontal cortex
Hippocampus
Score
0.5
0.6
b
Donor status
Region
GRIA1
GRIA2
GRIA3
GRIA4
GRID1
GRID2
GRID2IP
GRIK1
GRIK2
GRIK3
GRIK4
GRIK5
GRIN1
GRIN2A
GRIN2B
GRIN2C
GRIN2D
GRIN3A
GRIN3B
GRINA
GRIP1
GRIP2
GRIPAP1
GRM1
GRM2
GRM3
GRM4
GRM5
GRM6
GRM7
GRM8
GLRA1
GLRA2
GLRA3
ADRA1A
ADRA1B
ADRA1D
ADRA2A
ADRA2B
ADRA2C
ADRB1
ADRB2
HTR1D
HTR1E
HTR1F
HTR2A
HTR2B
HTR2C
HTR3B
HTR3E
HTR4
HTR5A
HTR7
GABBR1
GABBR2
GABRA1
GABRA2
GABRA3
GABRA4
GABRA5
GABRA6
GABRB1
GABRB2
GABRB3
GABRD
GABRG1
GABRG2
GABRG3
GABRP
GABRQ
GABRR1
GABRR2
CHRM1
CHRM2
CHRM3
CHRM5
CHRNA1
CHRNA2
CHRNA3
CHRNA4
CHRNA5
CHRNA6
CHRNA7
CHRNA10
CHRNB1
CHRNB2
CHRNB3
CHRNB4
CHRNE
CHRNG
BTK
ITGB2
C3
CD300A
TREM2
CSK
VAV1
CD14
CYBA
ANO6
RACK1
HCK
PLCG2
PLSCR1
PRKCD
CORO1A
GAS6
AIF1
SYK
PYCARD
FCGR1A
IRF8
FCER1G
LRP1
PLD4
IL15
PECAM1
ITGAL
NCF4
TYROBP
LEPR
BIN2
ITGAM
CALR
GRK3
WAS
GRK2
JAK3
PIK3CD
ADCY7
PIK3CG
PLCB2
CXCL16
CX3CR1
PIK3R6
LGALS9
TLR7
CSF1R
IL4R
IL17RA
HMOX1
DDX3X
XIAP
PRKN
BST2
TMSB4X
FCGR3A
HLA−A
HSPA1B
LILRB1
CD81
PARP9
NLRC5
KCNQ1OT1
LRRK2
LAPTM5
CASP1
NOD1
PTPN2
TLR1
TNFRSF14
CASP4
HLA−DRB1
PARP14
ATP6AP2
UFD1
STMP1
OTUD5
HLA−E
LY96
CDC37
MIB2
HSPA1A
IFI16
PTAFR
B2M
HSPB1
IRF5
HK1
CD4
VSIR
GSDMD
ZFP36
POU2F2
GPSM3
RPS3
RNF135
CCDC88B
CLEC5A
HLA−DPA1
CEBPB
TLR5
TRAF3IP3
Donor status
Healthy
TLE
AD
RRMS
SPMS
Region
Hippocampus
Prefrontal cortex
Receptor type
Glutamate
Glycine
Acetylcholine
Epinephrine and Norepinephrine
5-hydroxytryptamine
GABA
Type
Phagocytosis
Chemokine
Cytokine
Expression
2
1
0
−1
−2
c
TNF
IL1A
Glutamate receptors
GRM8
GRM7
GRM6
GRM5
GRM4
GRM3
GRM2
GRM1
GRINA
GRIN3B
GRIN3A
GRIN2D
GRIN2C
GRIN2B
GRIN2A
GRIN1
GRIK5
GRIK4
GRIK3
GRIK2
GRIK1
GRID2
GRID1
GRIA4
GRIA3
GRIA2
GRIA1
−Log10(P value)
Correlation
−0.25
0.00
0.25
0.50
0.75
−0.1
0.0
0.1
0.2
0.3
0.4
0.5