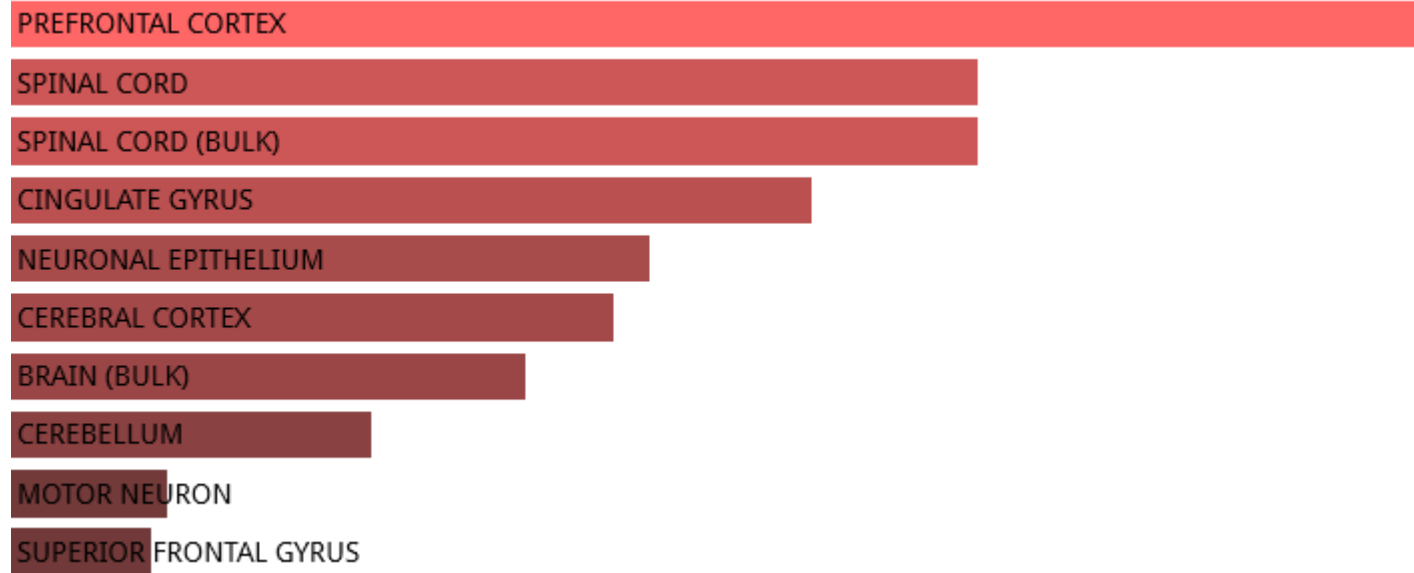


Supplemental Figure S1. Identification of genes expression of which distinguishes thousands of anatomically distinct areas of the adult human brain, various regions of the central nervous system, and many different cell types and tissues in the human body using the Enrichr bioinformatics platform (see Methods for details).

ARCHS4 Human Tissues: 8,045 genes



ARCHS4 Human Tissues: 8,045 genes

Top 10 of 39 significant records

Term	Overlap	P-value	Adjusted P-value
PREFRONTAL CORTEX	1348/2316	2.06686E-62	2.23E-60
SPINAL CORD	1299/2316	1.17222E-47	4.22E-46
SPINAL CORD (BULK)	1299/2316	1.17222E-47	4.22E-46
CINGULATE GYRUS	1279/2316	3.13703E-42	8.47E-41
NEURONAL EPITHELIUM	1258/2316	6.71385E-37	1.45E-35
CEREBRAL CORTEX	1253/2316	1.09815E-35	1.98E-34
BRAIN (BULK)	1241/2316	7.35673E-33	1.14E-31
CEREBELLUM	1218/2316	8.73598E-28	1.18E-26
MOTOR NEURON	1184/2316	4.19448E-21	5.03E-20
SUPERIOR FRONTAL GYRUS	1181/2316	1.4634E-20	1.58E-19

Allen Brain Atlas Up: 8,045 genes

Thalamus, sensory-motor cortex related

Thalamus

mantle zone of DTTh

lateral part of alar p2

Ventral posterior complex of the thalamus

Central lateral nucleus of the thalamus

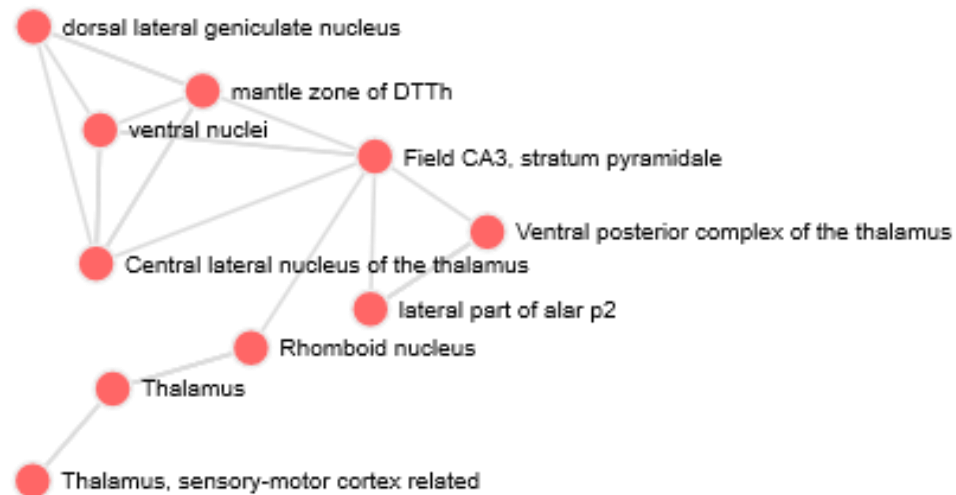
dorsal tier of thalamus

submedius thalamic nucleus

alar plate of p2 (alar thalamus)

Rhomboid nucleus

Allen Brain Atlas Up: 8,045 genes Networks

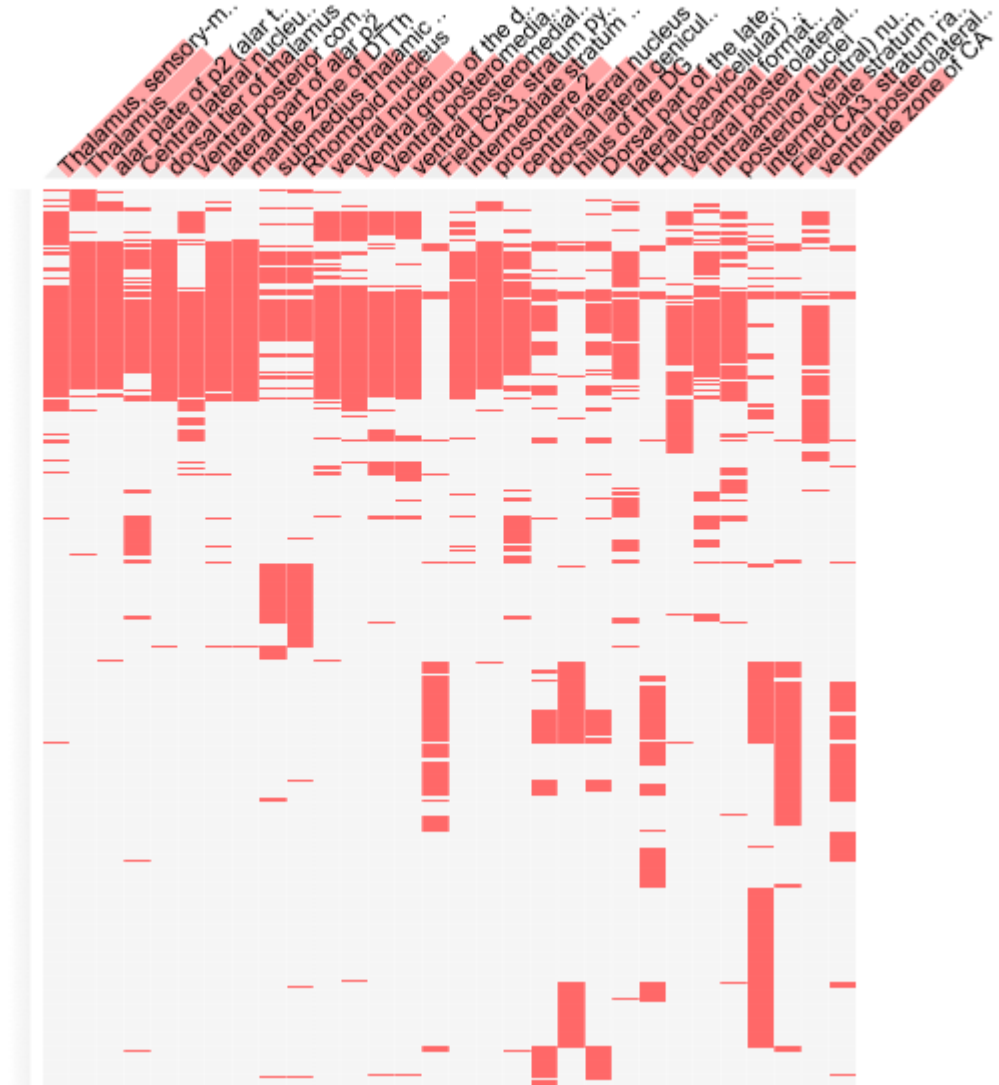


Allen Brain Atlas Up: 8,045 genes



Enriched Terms

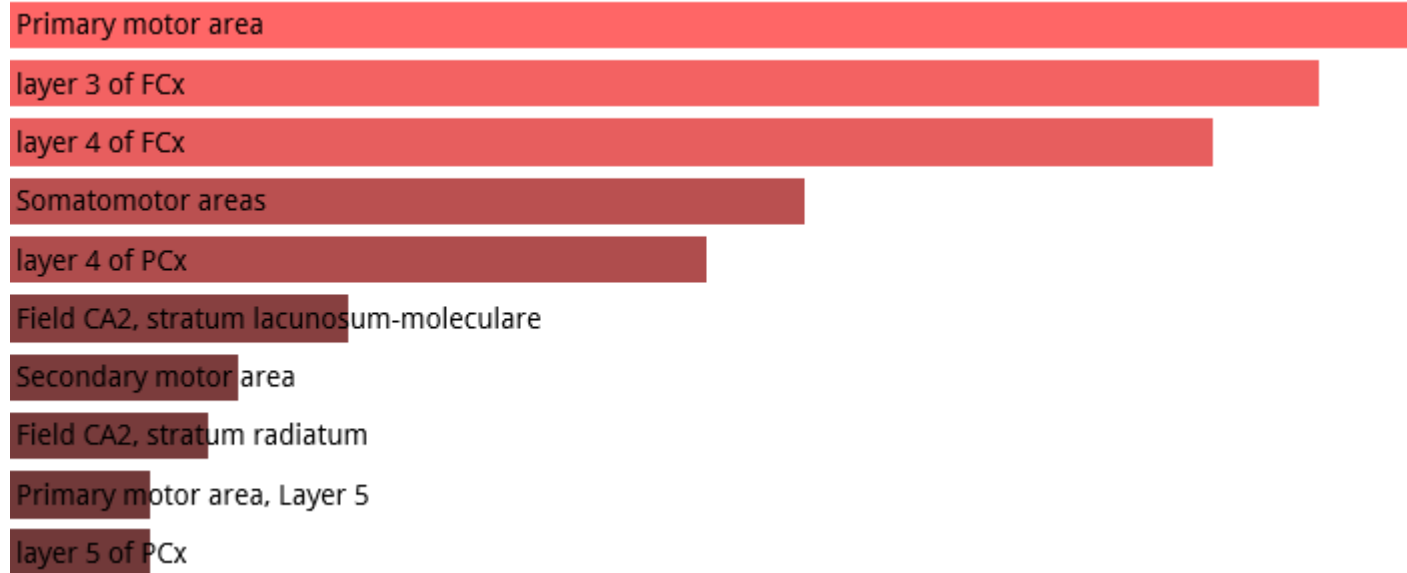
Input Genes



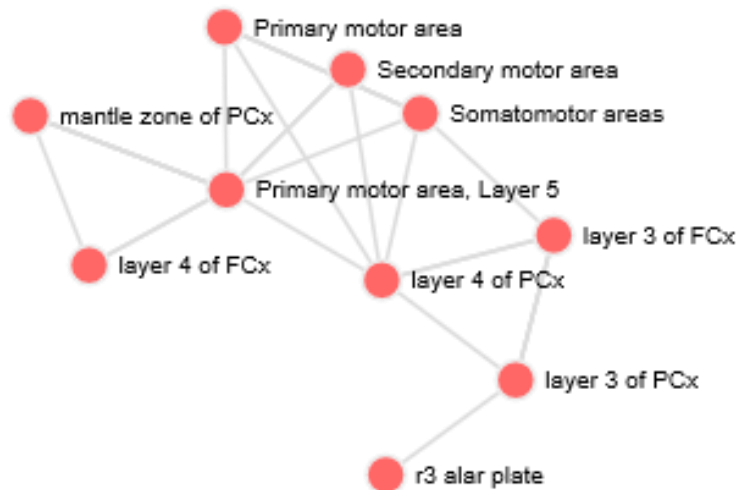
Allen Brain Atlas Up: 8,045 genes
Top 30 of 1,200 significant records

Term	Overlap	P-value	Adjusted P-value
Thalamus, sensory-motor cortex related	207/301	3.57E-21	7.82E-18
Thalamus	222/334	9.71E-20	2.42E-17
mantle zone of DTTh	204/301	9.94E-20	2.42E-17
lateral part of alar p2	204/301	9.94E-20	2.42E-17
Ventral posterior complex of the thalamus	204/301	9.94E-20	2.42E-17
Central lateral nucleus of the thalamus	204/301	9.94E-20	2.42E-17
alar plate of p2 (alar thalamus)	204/301	9.94E-20	2.42E-17
submedius thalamic nucleus	204/301	9.94E-20	2.42E-17
dorsal tier of thalamus	204/301	9.94E-20	2.42E-17
Rhomboid nucleus	227/345	2.51E-19	5.34E-17
ventral nuclei	203/301	2.92E-19	5.34E-17
Ventral group of the dorsal thalamus	203/301	2.92E-19	5.34E-17
Field CA3, stratum pyramidale	202/301	8.47E-19	1.24E-16
Ventral posteromedial nucleus of the thalamus	202/301	8.47E-19	1.24E-16
ventral posteromedial nucleus	202/301	8.47E-19	1.24E-16
intermediate stratum of DTTh	201/301	2.42E-18	2.94E-16
prosomere 2	201/301	2.42E-18	2.94E-16
central lateral nucleus	201/301	2.42E-18	2.94E-16
dorsal lateral geniculate nucleus	200/301	6.79E-18	7.84E-16
hilus of the DG	199/301	1.88E-17	2.06E-15
lateral (parvicellular) part of MD	198/301	5.13E-17	4.33E-15
Dorsal part of the lateral geniculate complex	198/301	5.13E-17	4.33E-15
Ventral posterolateral nucleus of the thalamus	198/301	5.13E-17	4.33E-15
posterior (ventral) nucleus	198/301	5.13E-17	4.33E-15
Hippocampal formation	198/301	5.13E-17	4.33E-15
intralaminar nuclei	198/301	5.13E-17	4.33E-15
intermediate stratum of DG	353/597	9.09E-17	7.38E-15
Field CA3, stratum radiatum	219/342	1.17E-16	9.12E-15
mantle zone of CA	197/301	1.38E-16	9.76E-15
Thalamus, polymodal association cortex related	197/301	1.38E-16	9.76E-15

Allen Brain Atlas Down: 8,045 genes



Allen Brain Atlas Down: 8,045 genes Networks

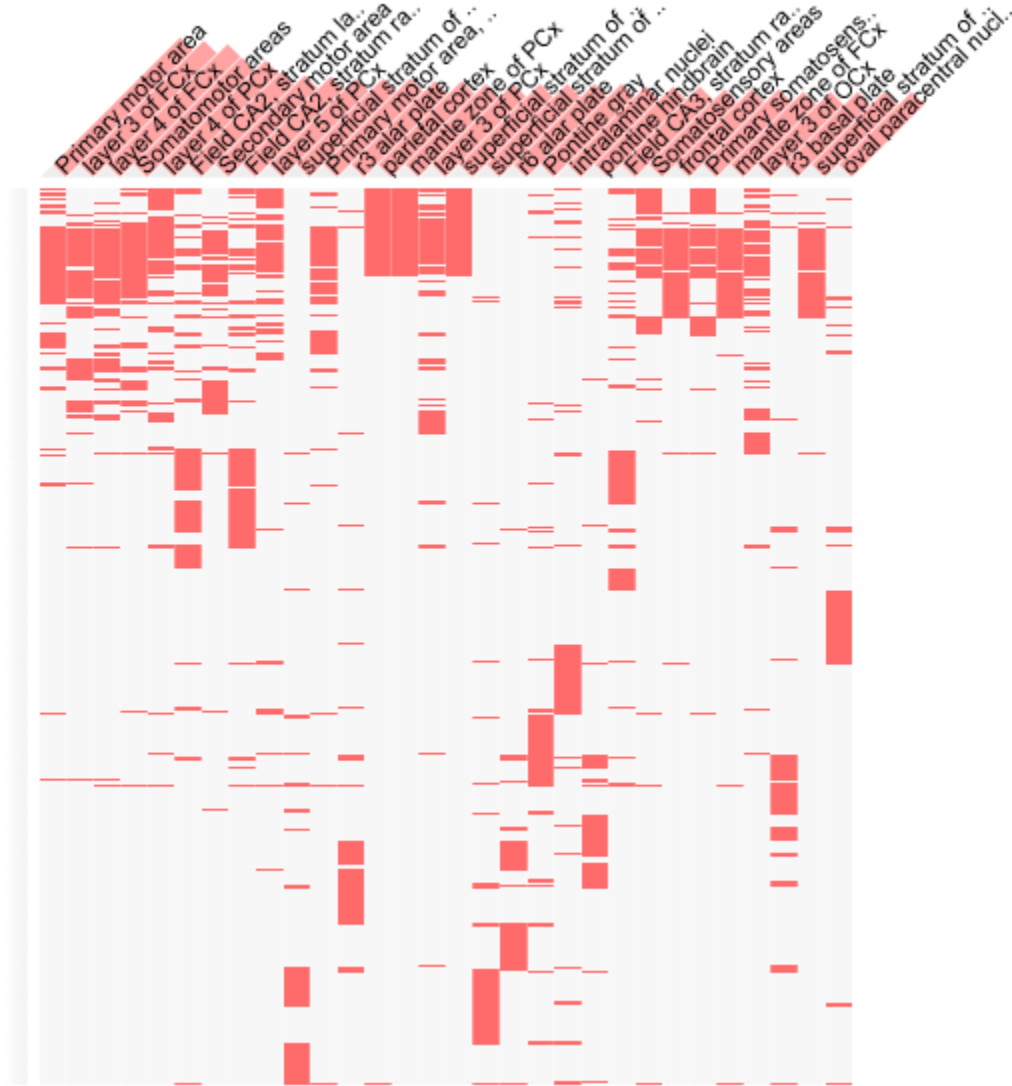


Allen Brain Atlas Down: 8,045 genes



Enriched Terms

Input Genes



Allen Brain Atlas Down: 8,045 genes

Top 31 of 1,062 significant records

Term	Overlap	P-value	Adjusted P-value
Primary motor area	195/300	5.73E-16	1.26E-12
layer 3 of FCx	194/300	1.49E-15	1.63E-12
layer 4 of FCx	193/300	3.81E-15	2.79E-12
Somatomotor areas	189/300	1.42E-13	7.77E-11
layer 4 of PCx	188/300	3.38E-13	1.48E-10
Field CA2, stratum lacunosum-moleculare	248/426	8.01E-12	2.93E-09
Secondary motor area	183/300	2.1E-11	6.57E-09
Field CA2, stratum radiatum	262/458	2.75E-11	7.54E-09
Primary motor area, Layer 5	182/300	4.59E-11	9.16E-09
layer 5 of PCx	182/300	4.59E-11	9.16E-09
superficial stratum of m1B	182/300	4.59E-11	9.16E-09
r3 alar plate	181/300	9.92E-11	1.67E-08
parietal cortex	181/300	9.92E-11	1.67E-08
mantle zone of PCx	180/300	2.11E-10	2.44E-08
layer 3 of PCx	180/300	2.11E-10	2.44E-08
Pontine gray	180/300	2.11E-10	2.44E-08
r6 alar plate	183/300	2.11E-10	2.44E-08
superficial stratum of PCx (cortical plate/marginal zone)	180/300	2.11E-10	2.44E-08
superficial stratum of p2B	180/300	2.11E-10	2.44E-08
intralaminar nuclei	179/300	4.44E-10	4.64E-08
pontine hindbrain	182/300	4.44E-10	4.64E-08
Field CA3, stratum radiatum	211/364	4.83E-10	4.81E-08
Primary somatosensory area	178/300	9.2E-10	8.07E-08
frontal cortex	179/300	9.2E-10	8.07E-08
Somatosensory areas	178/300	9.2E-10	8.07E-08
mantle zone of FCx	178/300	1.88E-09	1.37E-07
layer 3 of OCx	177/300	1.88E-09	1.37E-07
r3 basal plate	177/300	1.88E-09	1.37E-07
superficial stratum of FCx (cortical plate/marginal zone)	178/300	1.88E-09	1.37E-07
oval paracentral nucleus	177/300	1.88E-09	1.37E-07
Primary motor area, Layer 2/3	176/300	3.79E-09	2.6E-07