

# brainspan development

cell-type specific gene expression

RK

2015 - 02 - 12

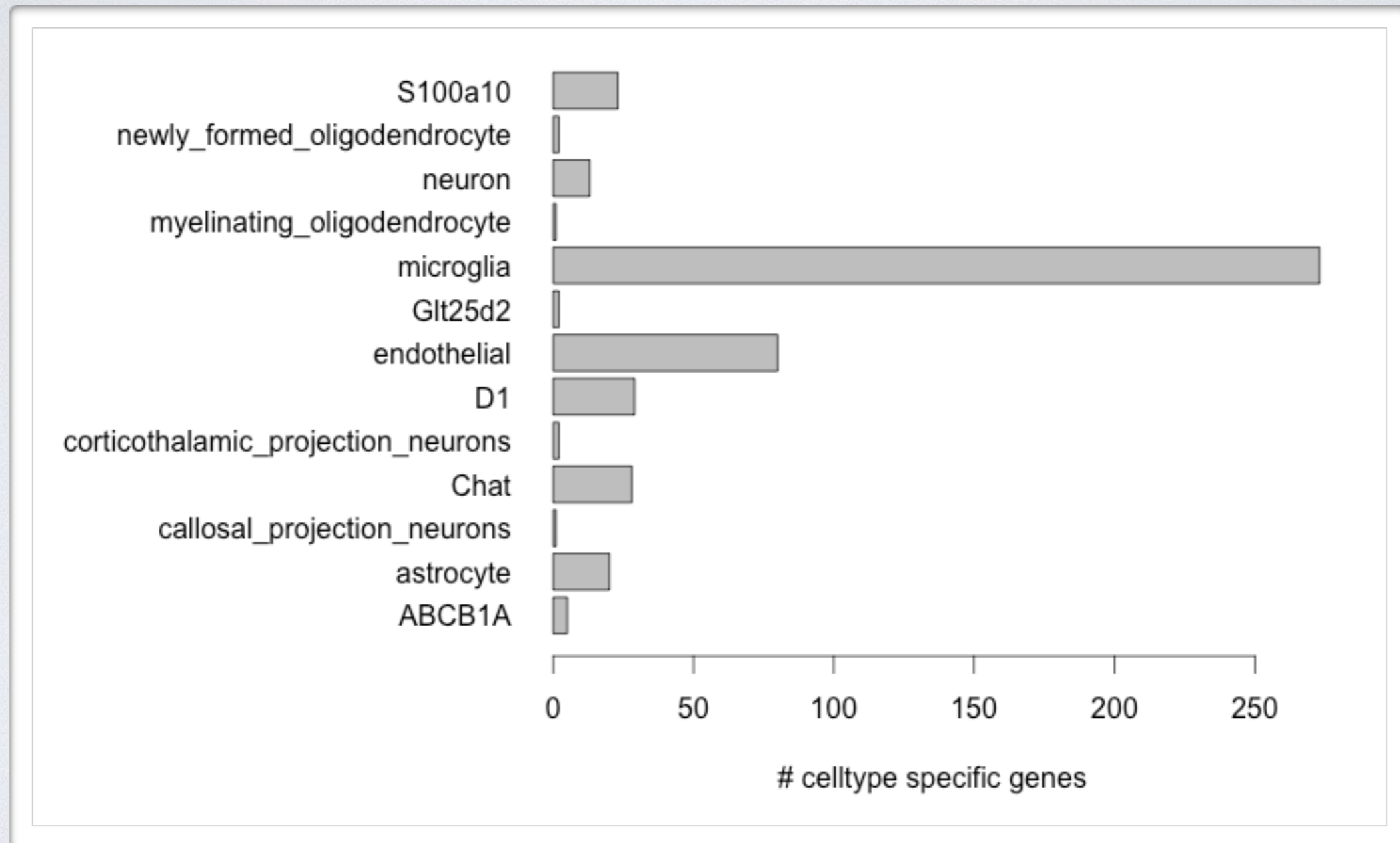


# cell-type specific genes

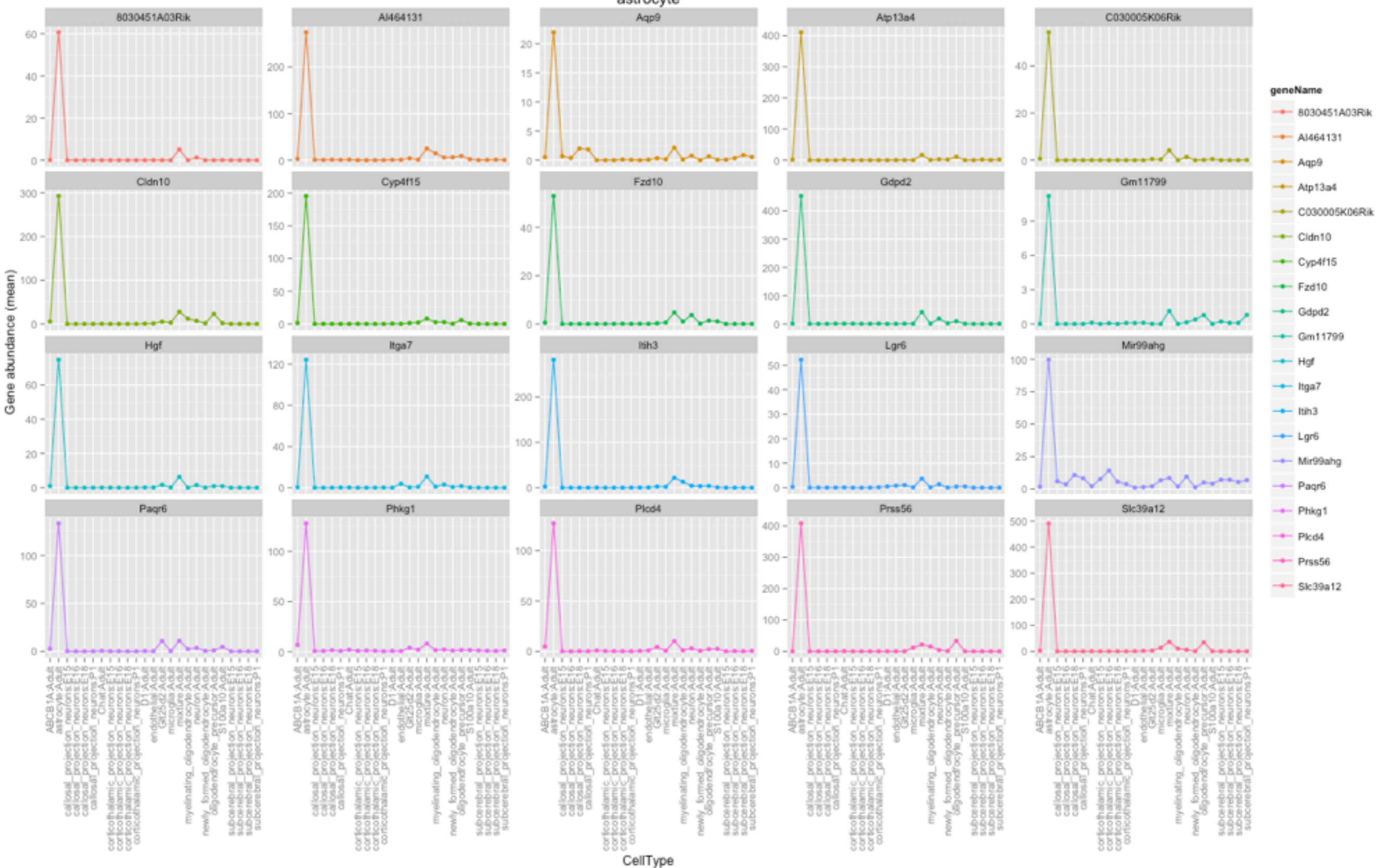
PI/project	publication	species	description	differential	done
Ben Barres	J Neurosci 2014	mouse	6 white matter cell-types	...	✓
Nat Heintz	...	mouse	5 bacTRAP cell-types	cocaine	✓
Paolo Arlotta	Neuron 2015	mouse	3 pyramidal neuron cell-types	4 timepoints	✓
Nenad Šestan	Cell Rep 2014	mouse	3 NCX cell-types	6 timepoints	-

- data processed from reads -> mm10 -> gencodeM4
- cell-type specific genes defined as 10x enriched in single cell-type w.r.t. next highest expressed cell-type

# cell-type specific gene counts

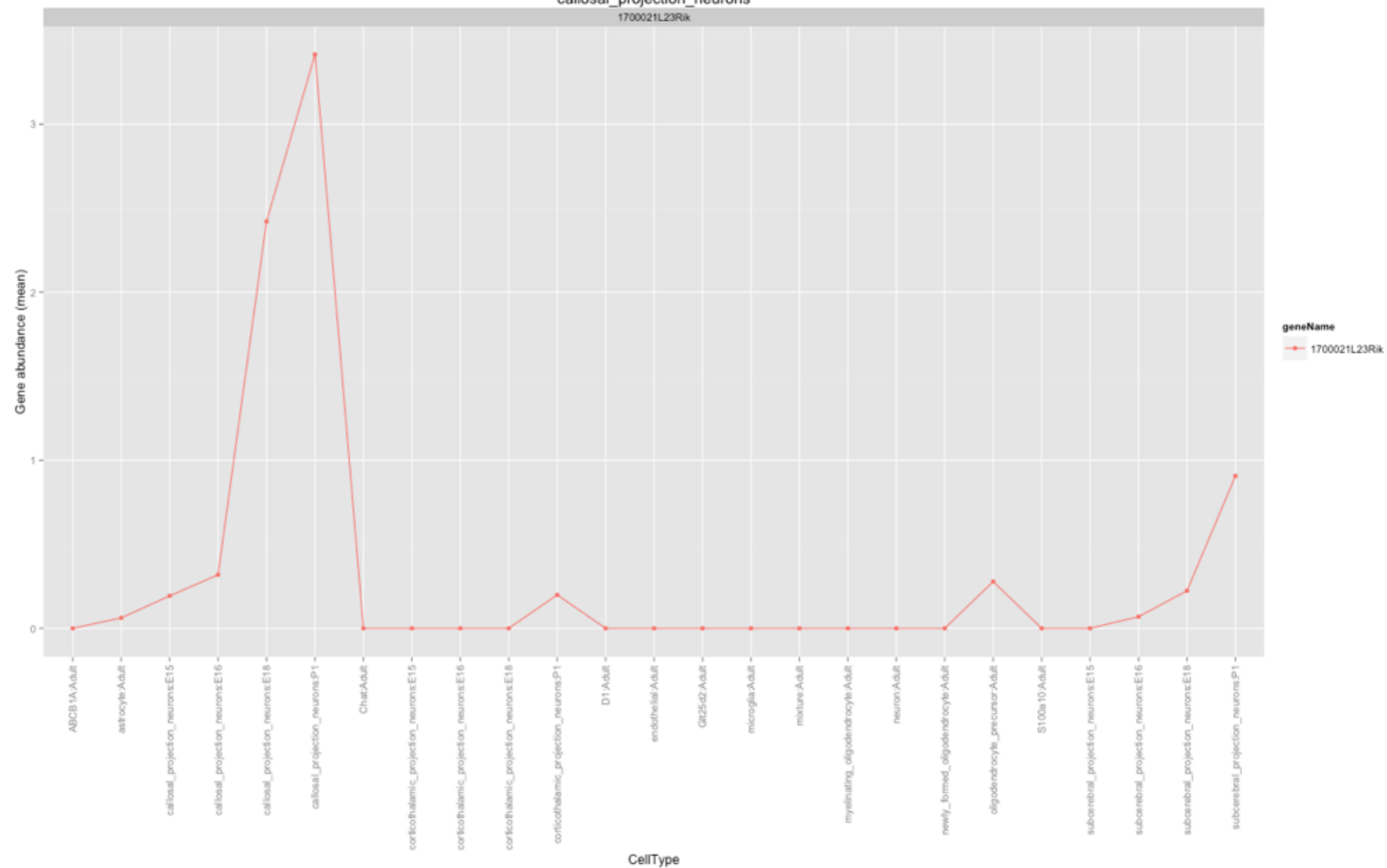


astrocyte



### callosal\_projection\_neurons

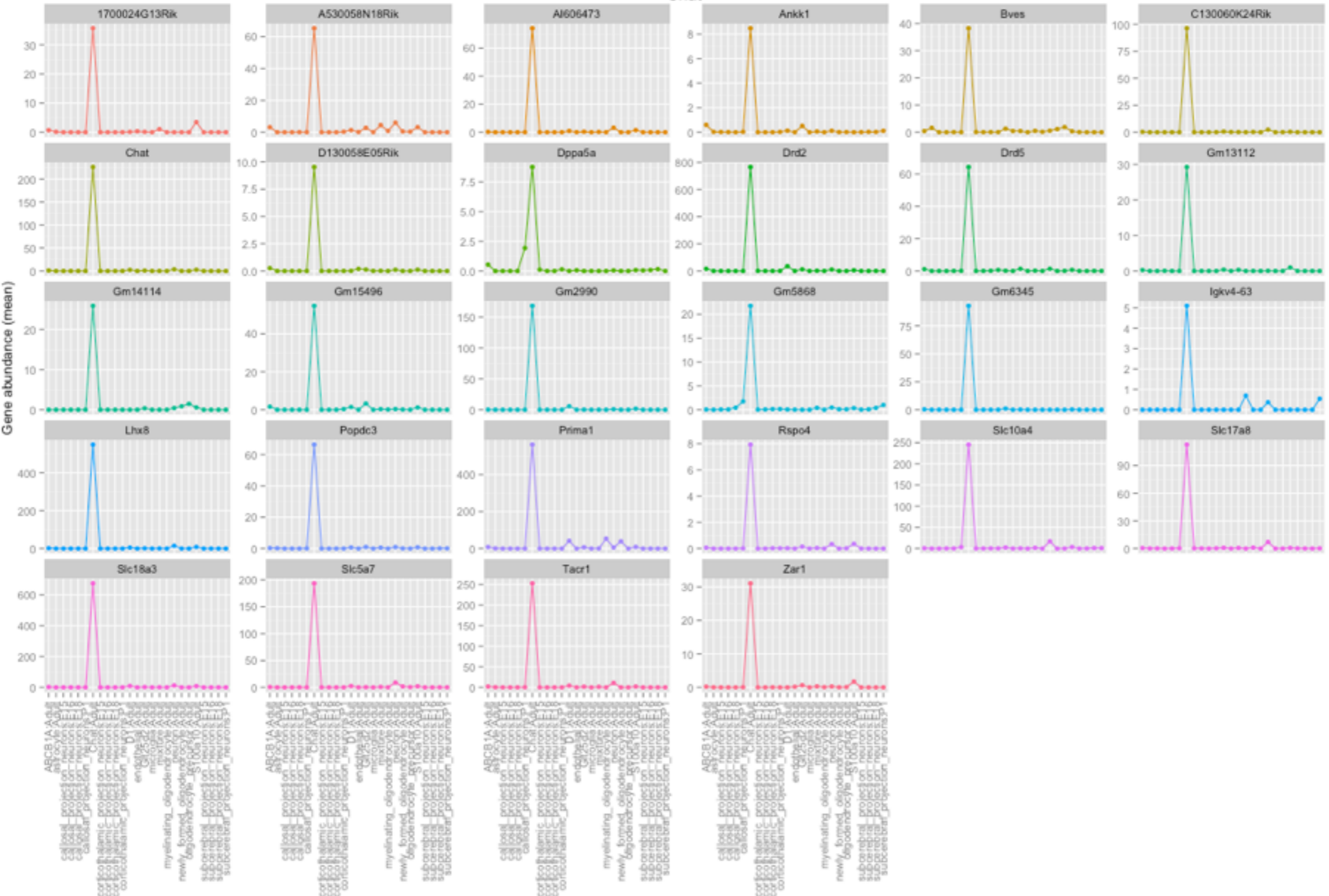
1700021L23Rik



### Chat

### geneName

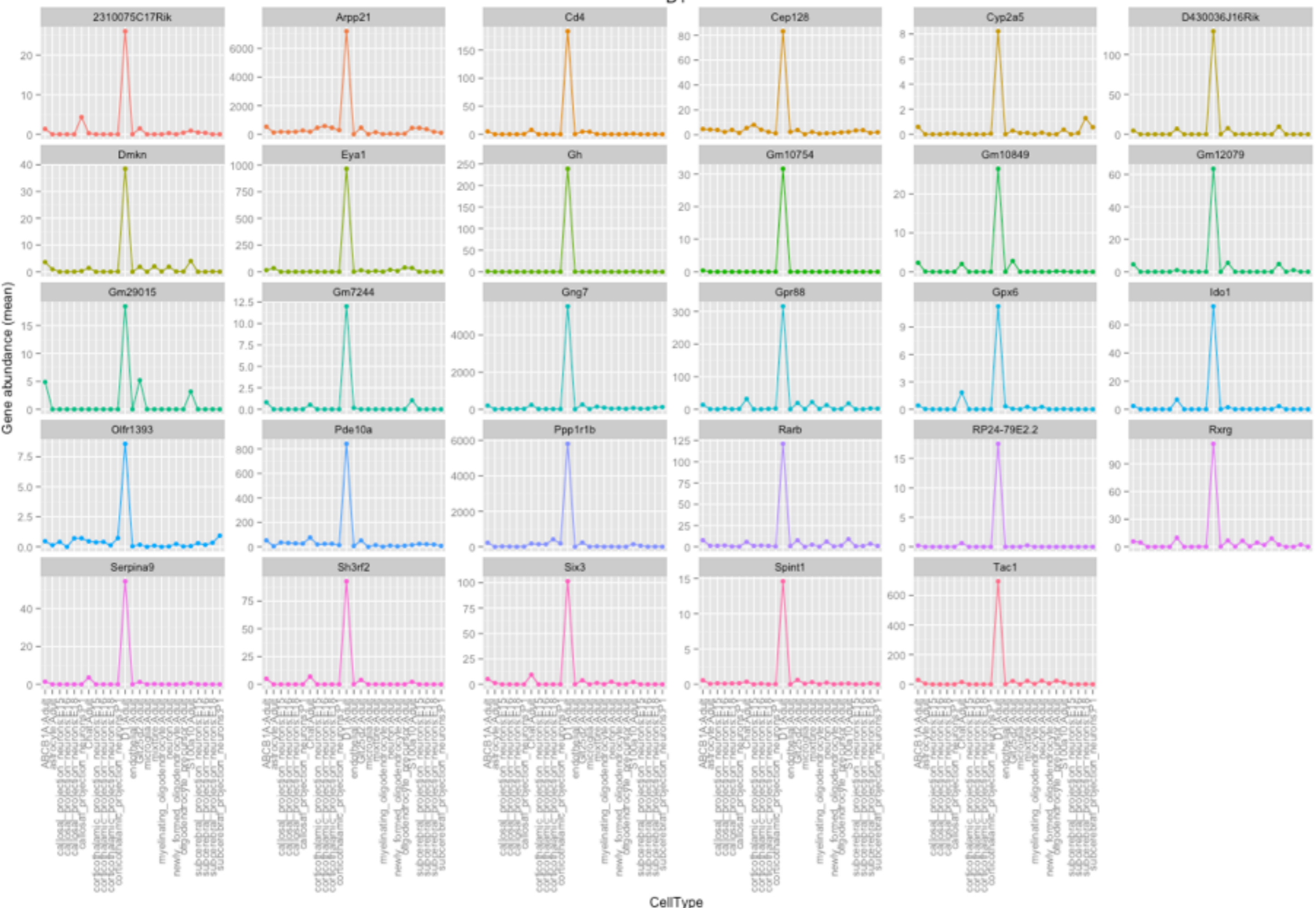
- 1700024G13Rik
- A530058N18Rik
- AI606473
- Ankk1
- Bves
- C130060K24Rik
- Chat
- D130058E05Rik
- Dppa5a
- Drd2
- Drd5
- Gm13112
- Gm14114
- Gm15496
- Gm2990
- Gm5868
- Gm6345
- Igkv4-63
- Lhx8
- Popdc3
- Prima1
- Rspo4
- Slc10a4
- Slc17a8
- Slc18a3
- Slc5a7
- Tacr1
- Zar1



CellType

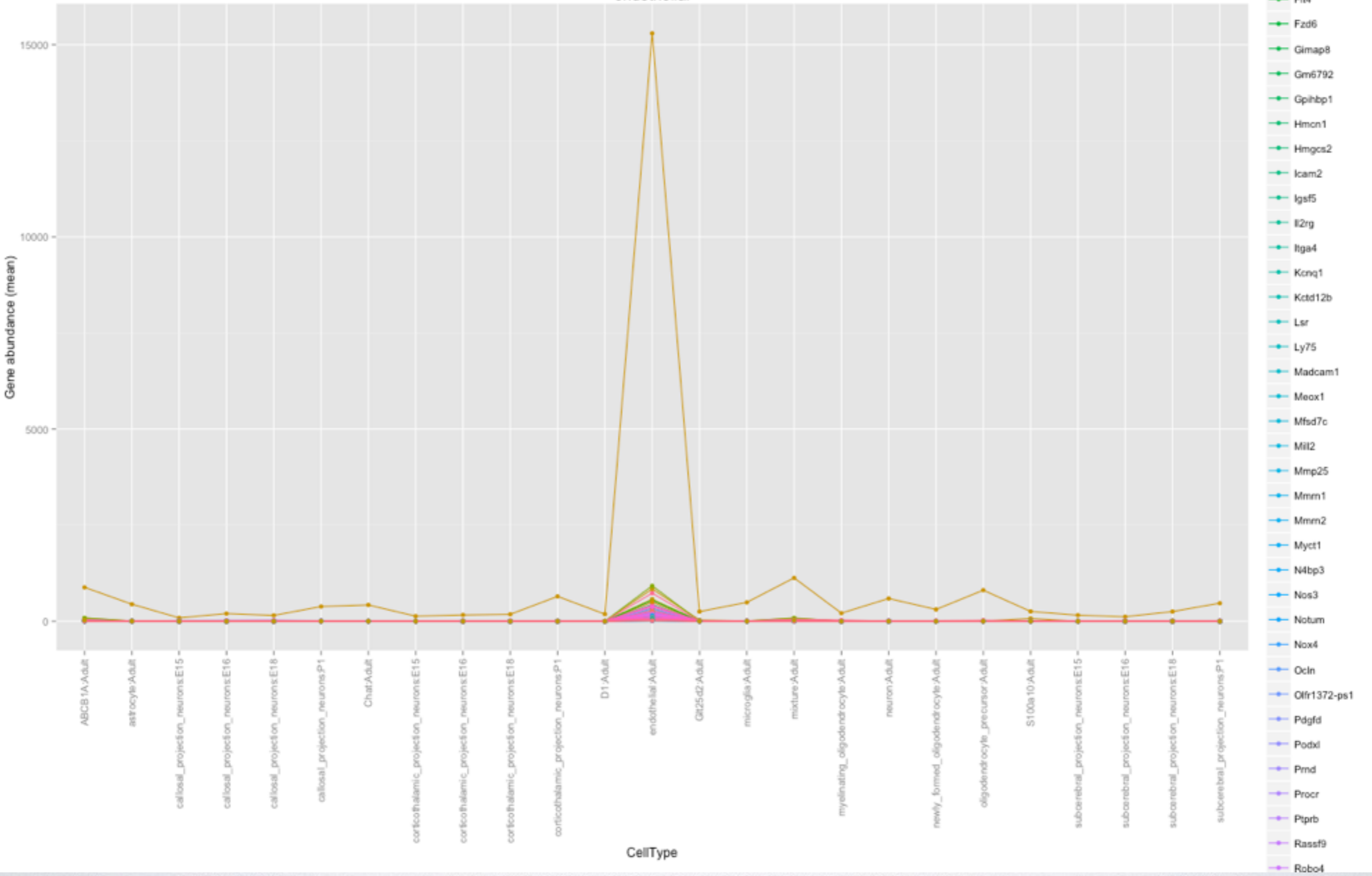
D1

geneName



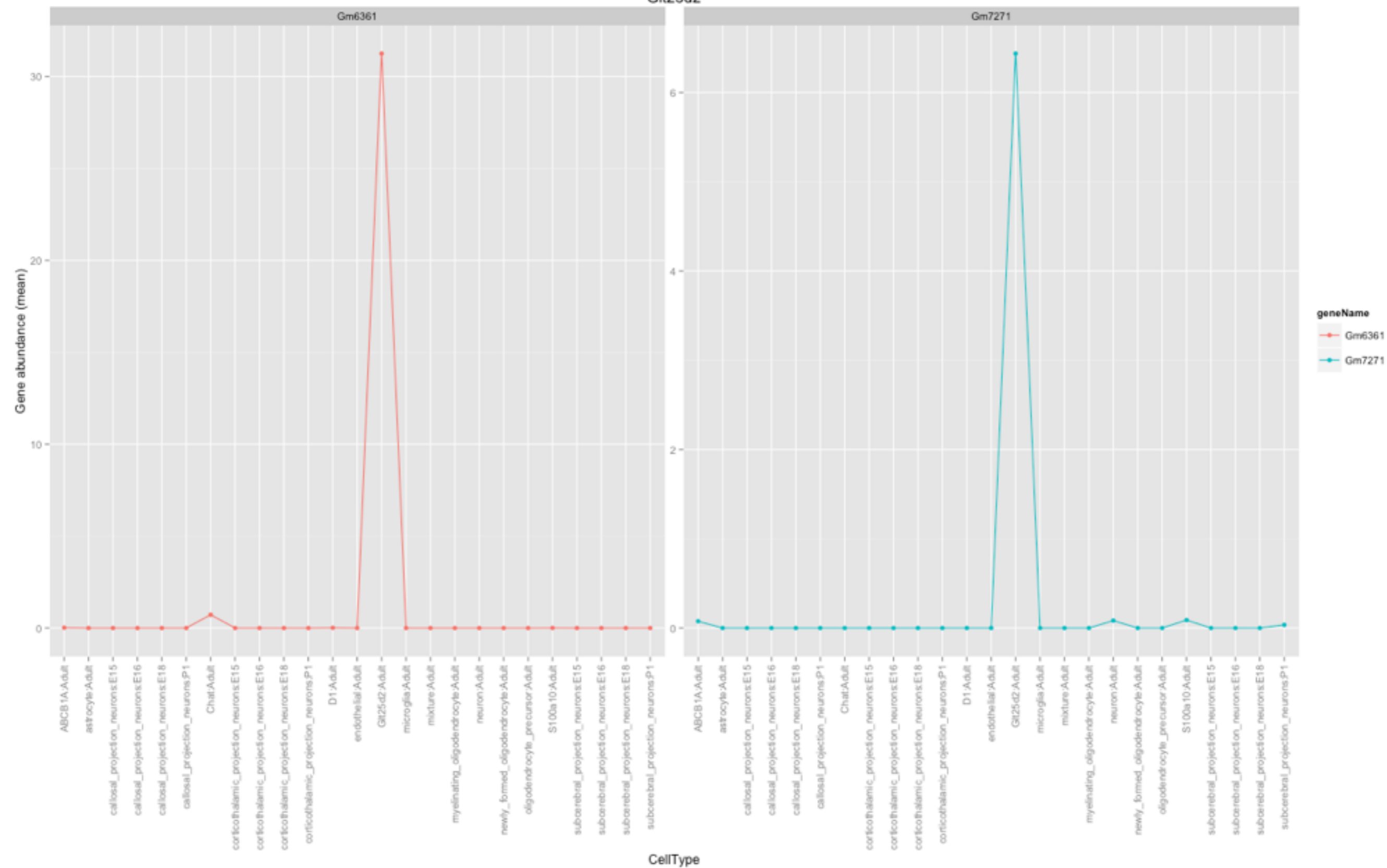
- 2310075C17Rik
- Arpp21
- Cd4
- Cep128
- Cyp2a5
- D430036J16Rik
- Dmkn
- Eya1
- Gh
- Gm10754
- Gm10849
- Gm12079
- Gm29015
- Gm7244
- Gng7
- Gpr88
- Gpx6
- Ido1
- Olfr1393
- Pde10a
- Ppp1r1b
- Rarb
- RP24-79E2.2
- Rxrg
- Serpina9
- Sh3rf2
- Six3
- Spint1
- Tac1

endothelial





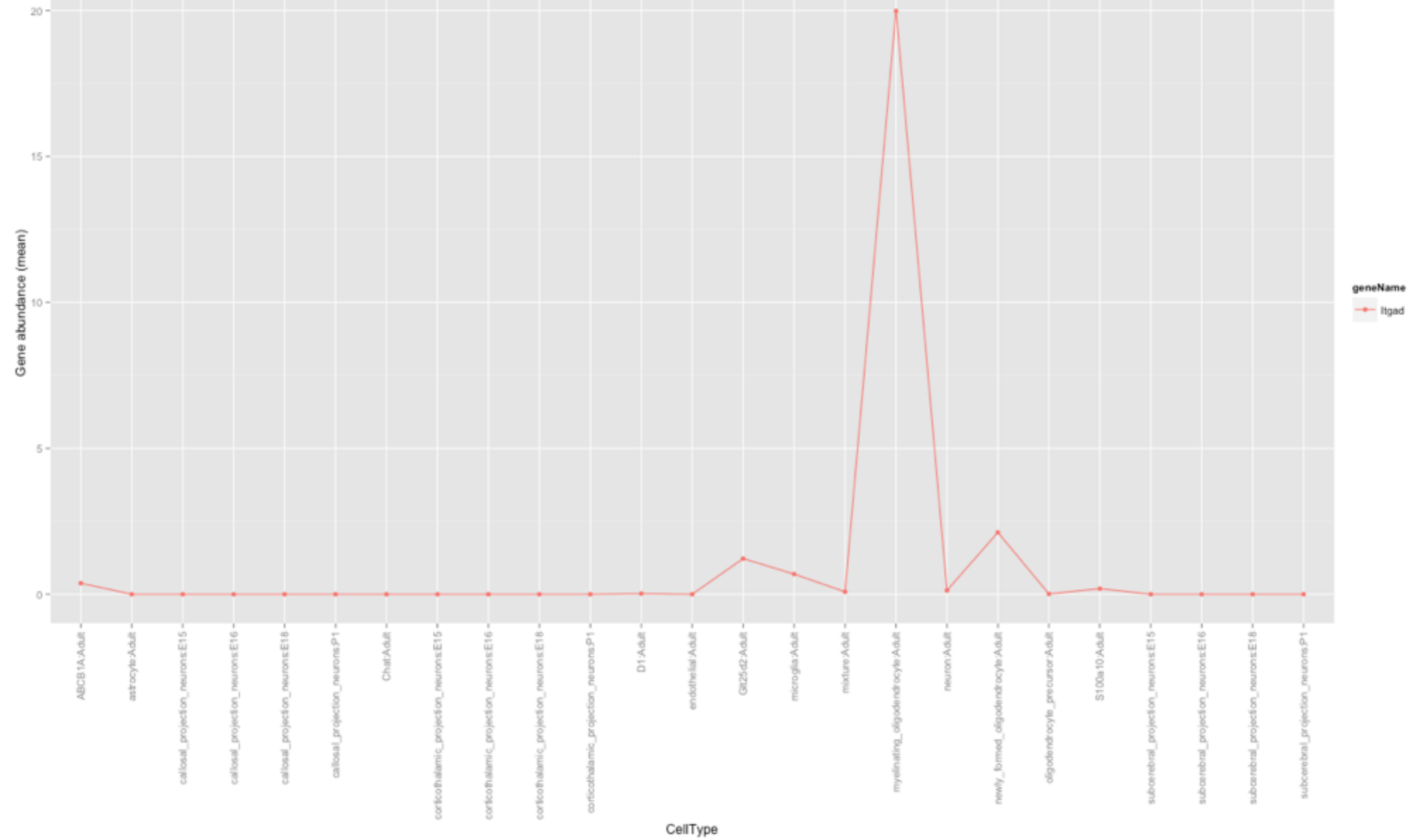
### Glit25d2



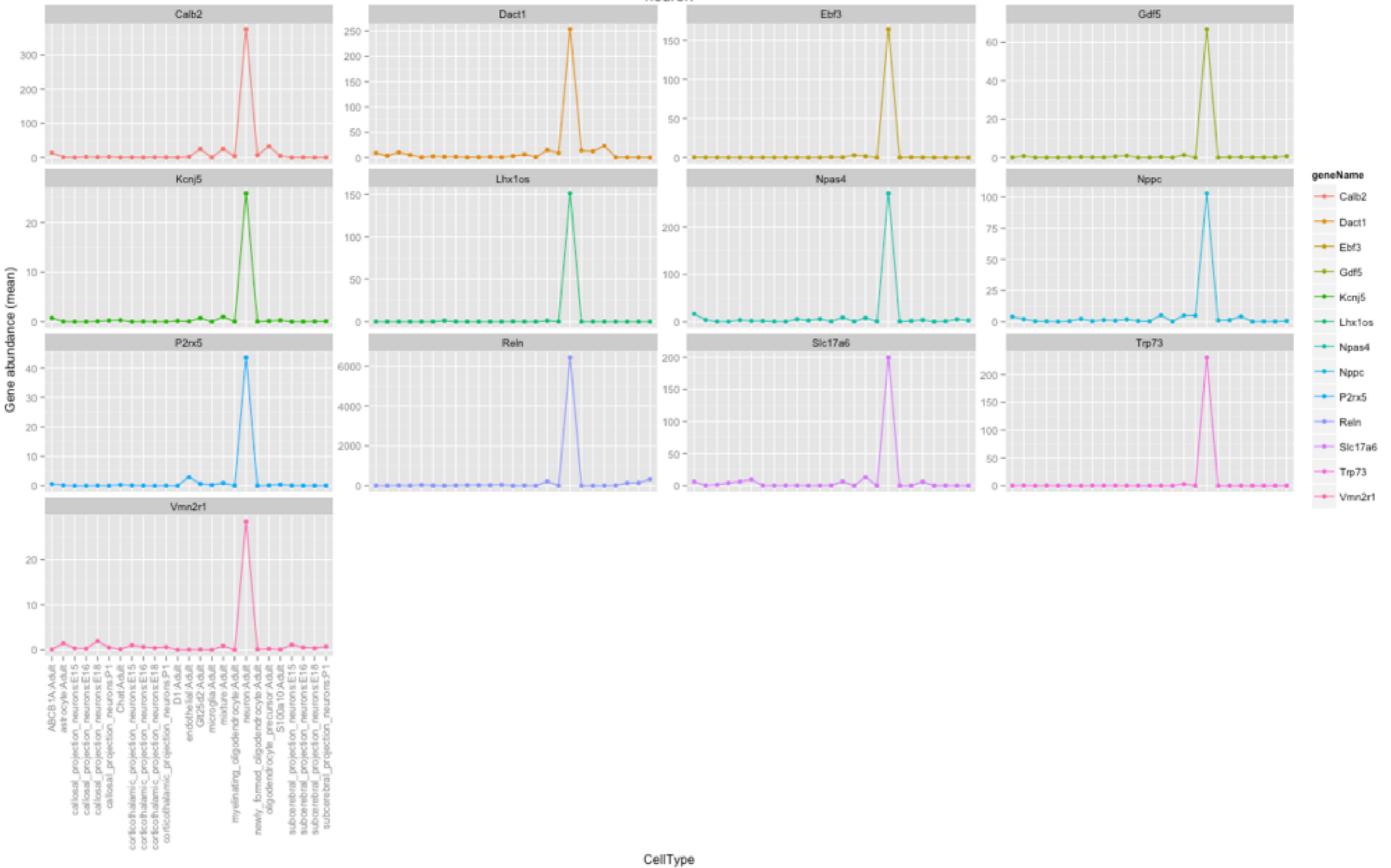


# myelinating\_oligodendrocyte

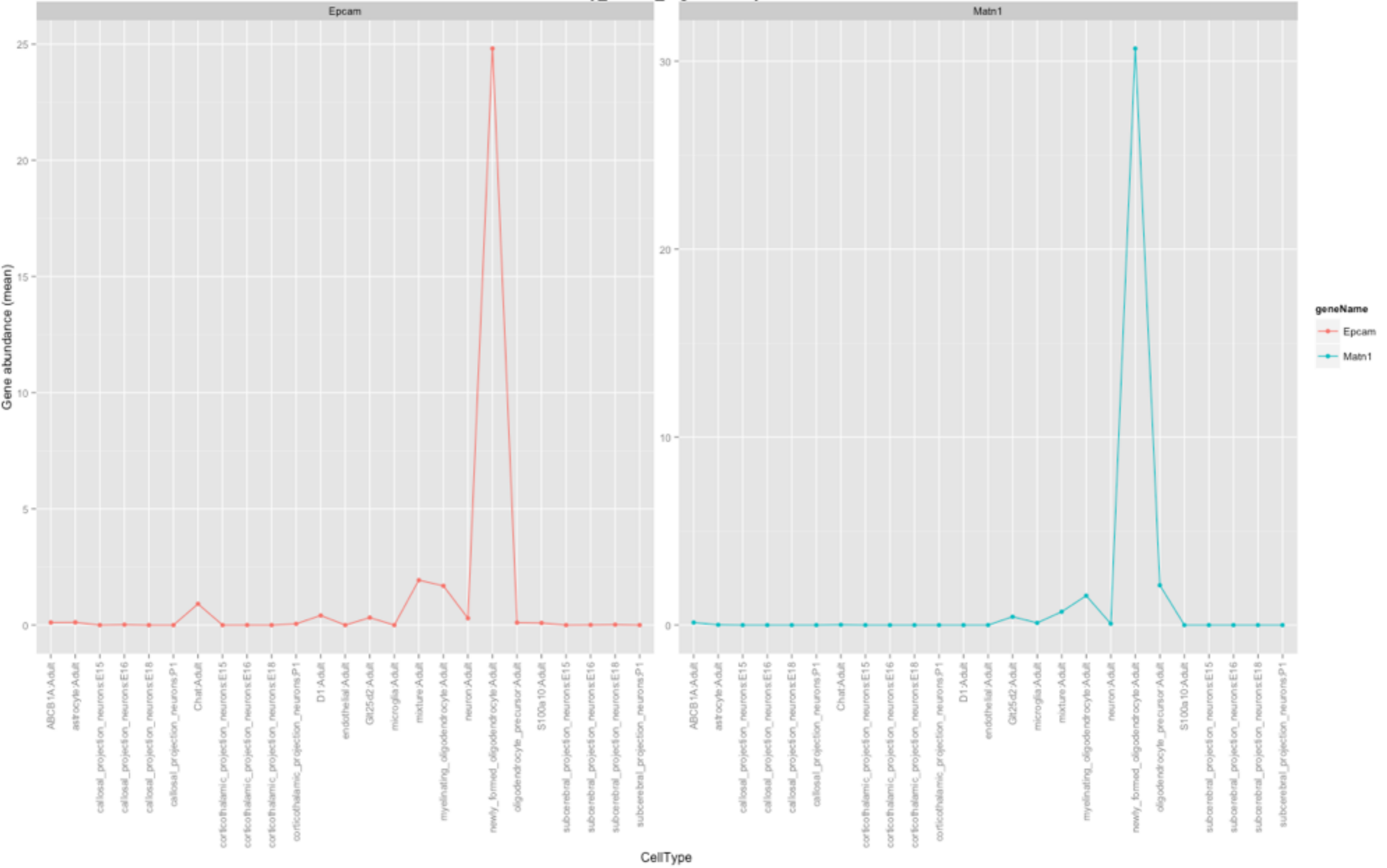
Itgad



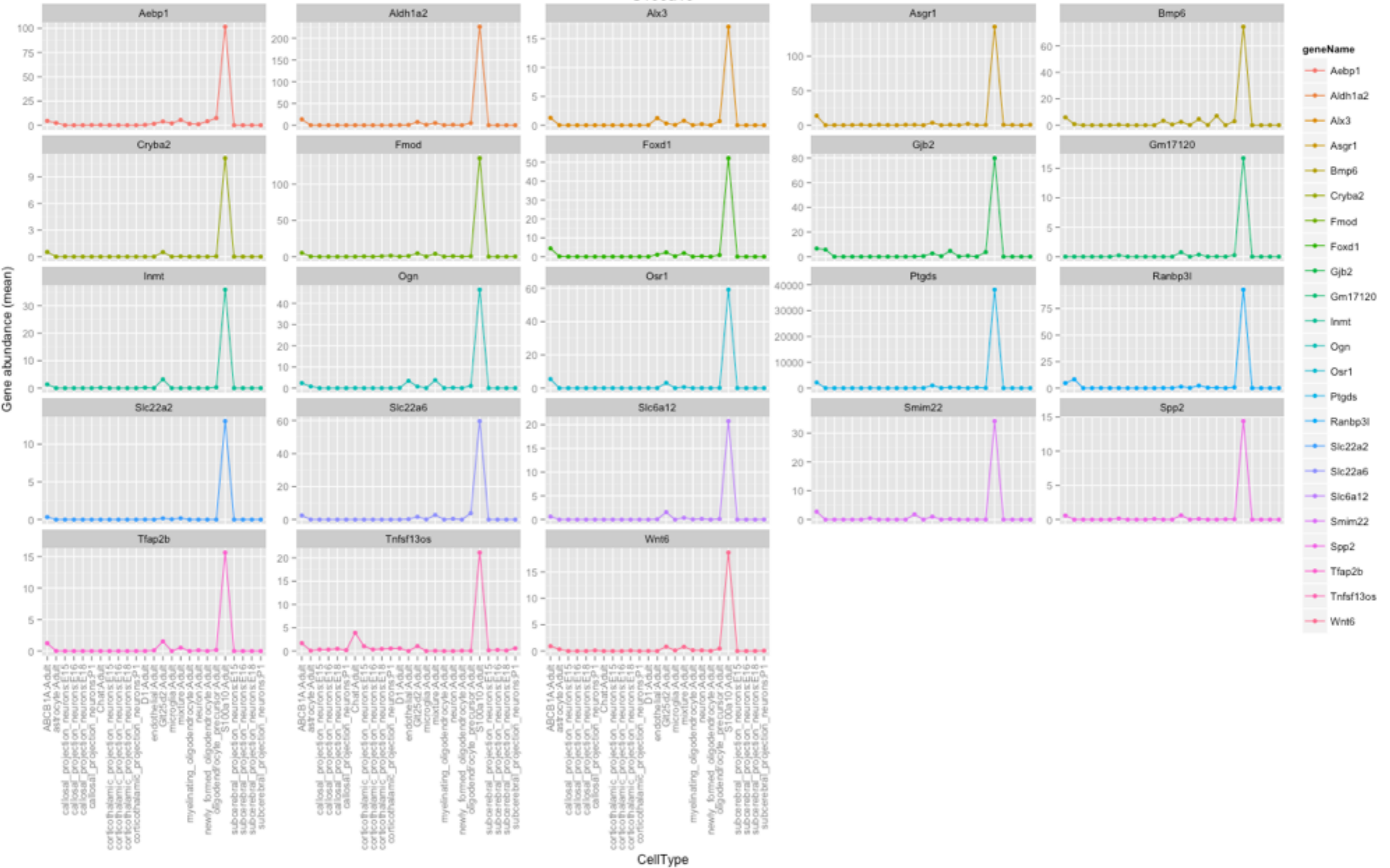
neuron



newly\_formed\_oligodendrocyte



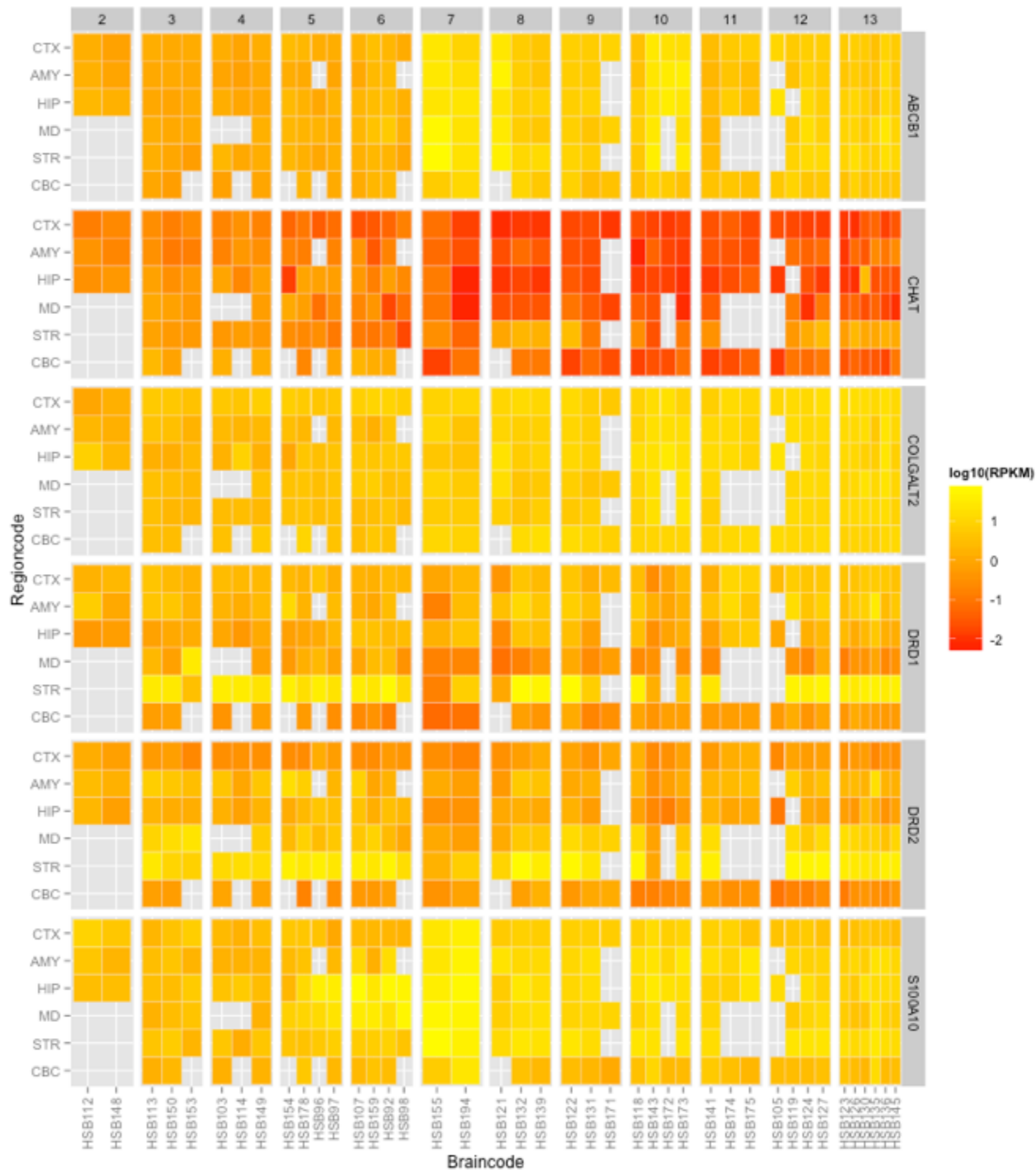
### S100a10



# cell-type specific genes

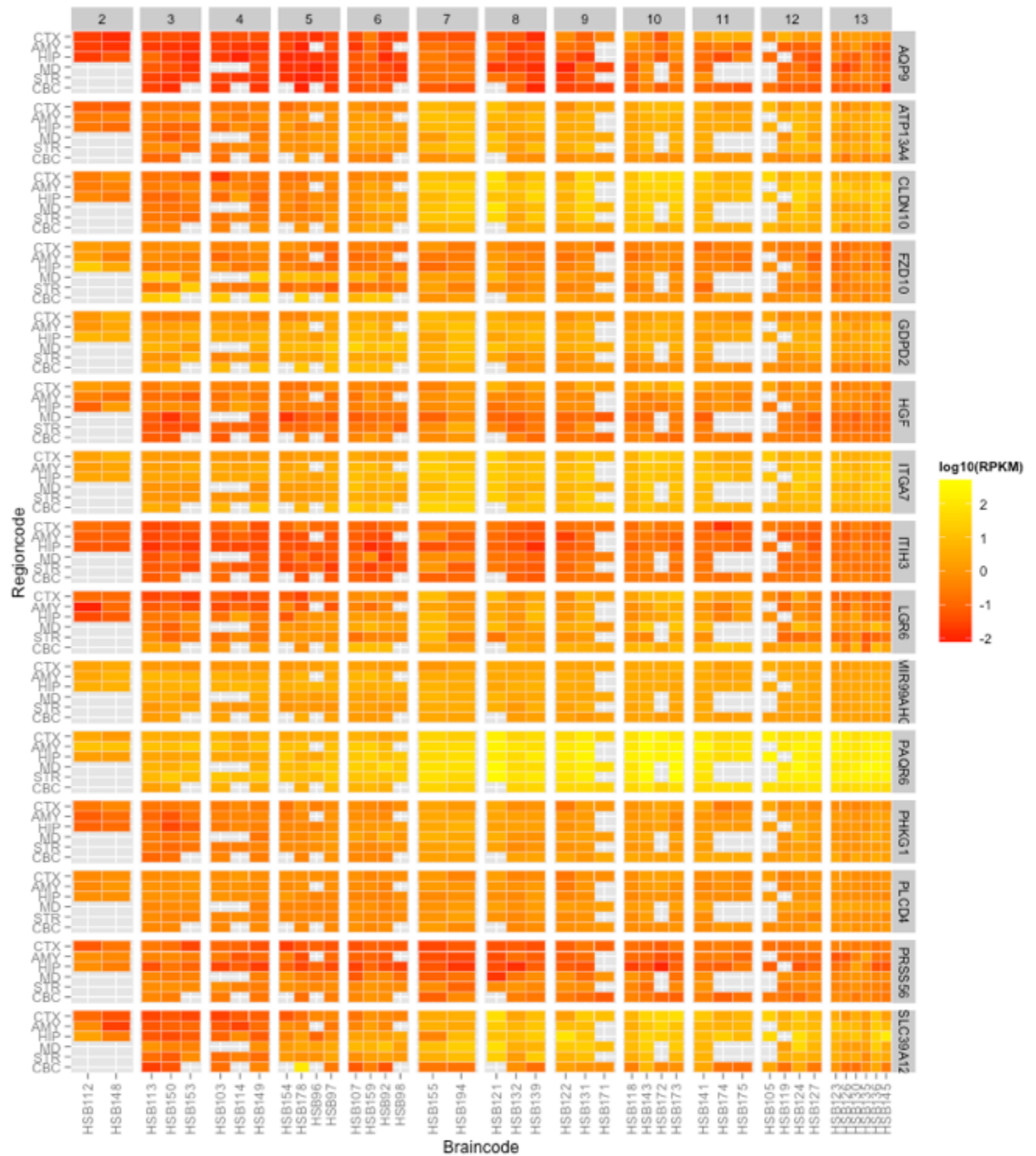
- take these genes from mouse and look at the brainspan RPKM data...

# bacTRAP promoters





# astrocyte



astrocyte  
(known)

