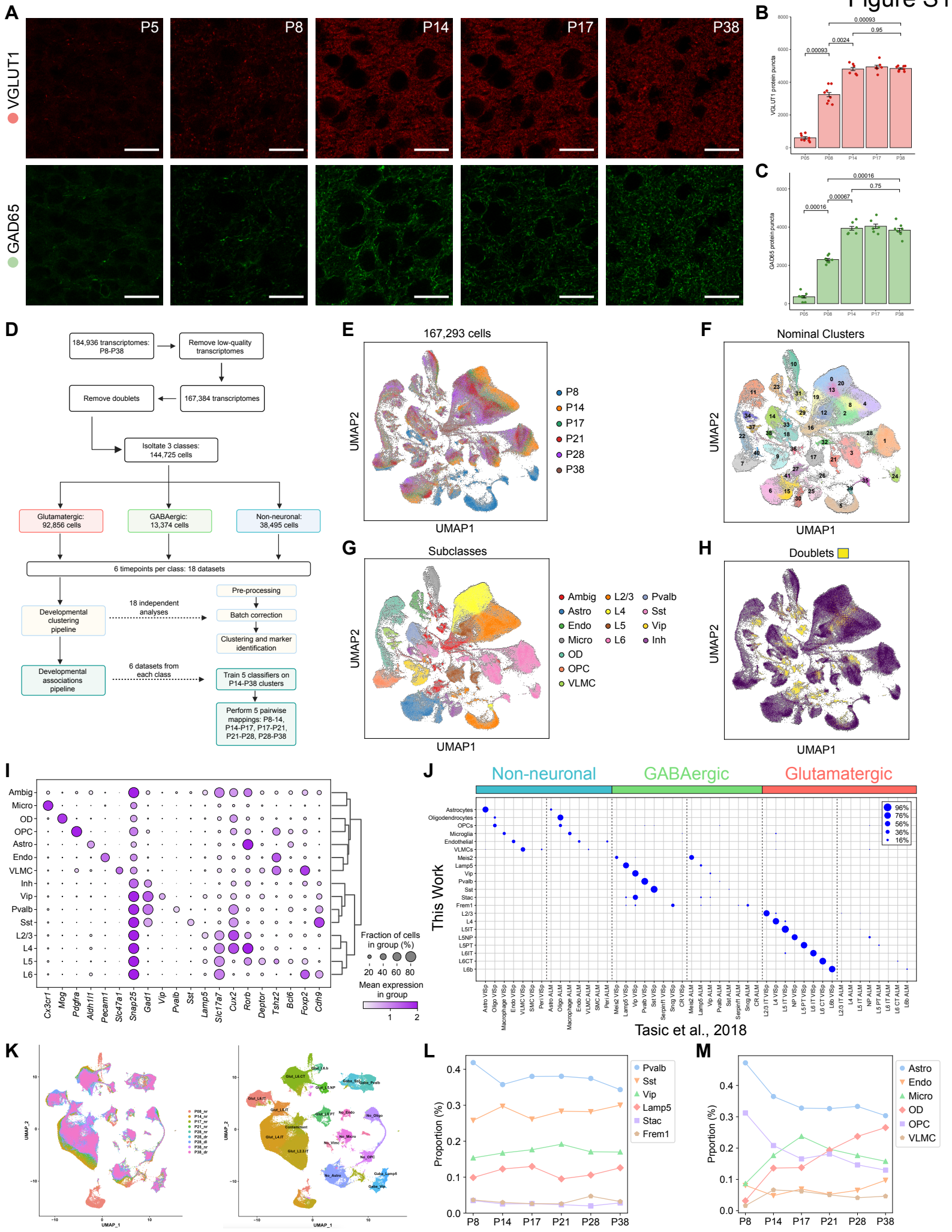
Figure S1


A
P5
P8
P14
P17
P38
VGLUT1
GAD65
B
VGLUT1 protein puncta
0.00093
0.0024
0.95
0.00093
P05
P08
P14
P17
P38
C
GAD65 protein puncta
0.00016
0.00067
0.75
0.00016
D
184,936 transcriptomes: P8-P38
Remove low-quality transcriptomes
167,384 transcriptomes
Remove doublets
Isoltate 3 classes: 144,725 cells
Glutamatergic: 92,856 cells
GABAergic: 13,374 cells
Non-neuronal: 38,495 cells
6 timepoints per class: 18 datasets
Developmental clustering pipeline
18 independent analyses
Pre-processing
Batch correction
Clustering and marker identification
Developmental associations pipeline
6 datasets from each class
Train 5 classifiers on P14-P38 clusters
Perform 5 pairwise mappings: P8-14, P14-P17, P17-P21, P21-P28, P28-P38
E
167,293 cells
UMAP2
UMAP1
P8
P14
P17
P21
P28
P38
F
Nominal Clusters
UMAP2
UMAP1
G
Subclasses
UMAP2
UMAP1
Ambig
Astro
Endo
Micro
OD
OPC
VLMC
L2/3
L4
L5
L6
Pvalb
Sst
Vip
Inh
H
Doublets
UMAP2
UMAP1
I
Ambig
Micro
OD
OPC
Astro
Endo
VLMC
Inh
Vip
Pvalb
Sst
L2/3
L4
L5
L6
Cx3cr1
Mog
Pdgfra
Aldh1l1
Pecam1
Slc47a1
Snap25
Gad1
Vip
Pvalb
Sst
Lamp5
Slc17a7
Cux2
Rorb
Deptor
Tshz2
Bcl6
Foxp2
Cdh9
Fraction of cells in group (%)
20 40 60 80
Mean expression in group
1 2
J
Non-neuronal
GABAergic
Glutamatergic
This Work
Tasic et al., 2018
96%
76%
56%
36%
16%
Astrocytes
Oligodendrocytes
OPCs
Microglia
Endothelial
VLMCs
Meis2
Lamp5
Vip
Pvalb
Sst
Stac
Frem1
L2/3
L4
L5IT
L5NP
L5PT
L6IT
L6CT
L6b
K
UMAP_1
UMAP_2
L
Proportion (%)
Pvalb
Sst
Vip
Lamp5
Stac
Frem1
P8
P14
P17
P21
P28
P38
M
Prportion (%)
Astro
Endo
Micro
OD
OPC
VLMC
P8
P14
P17
P21
P28
P38