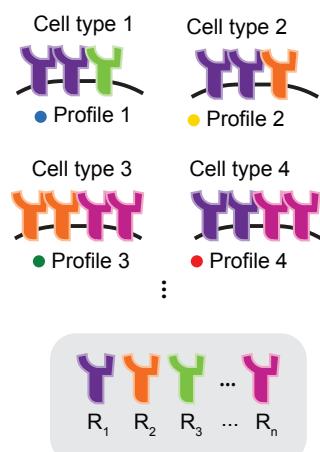


Figure 1: Pathway expression profiles could recur across diverse cell types

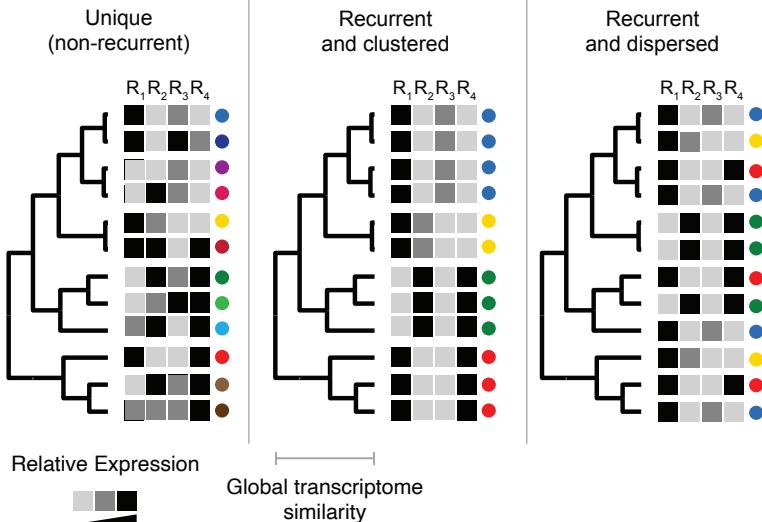
A

Receptor expression profiles



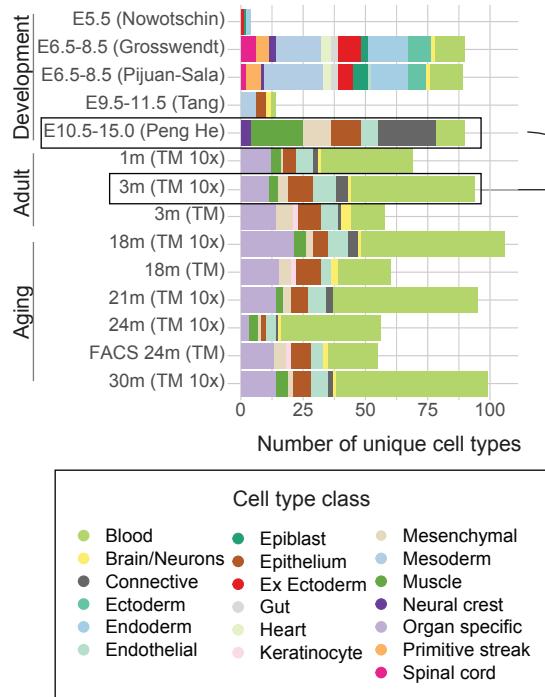
B

Pathway profiles could be...



C

Multiple mouse cell atlas datasets

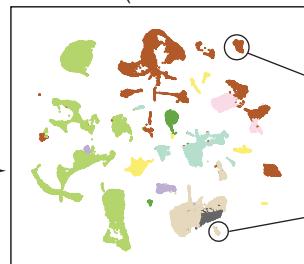


D

Individual cell atlases
Single-cell transcriptome profiles

1 dot = 1 cell

Tabula muris (3 month old mouse)

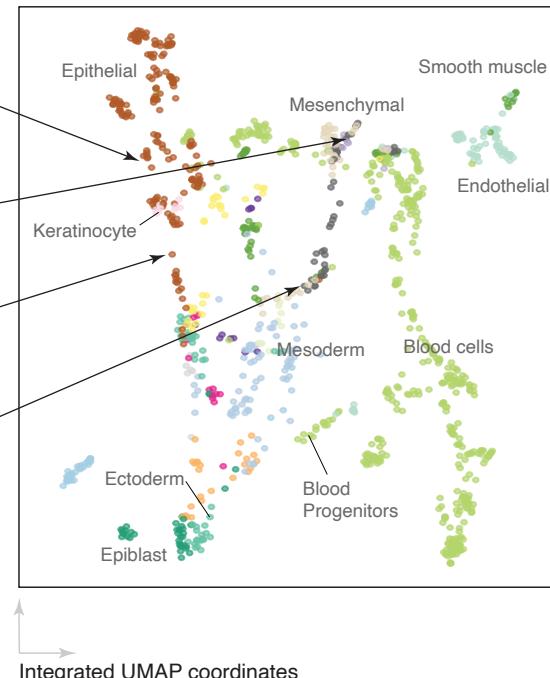


Forelimb (Days E10.5 - E15.0)

Integrated cell state atlas
Global cluster-averaged profiles

All data sets in (C)

1 dot = 1 cell cluster



E

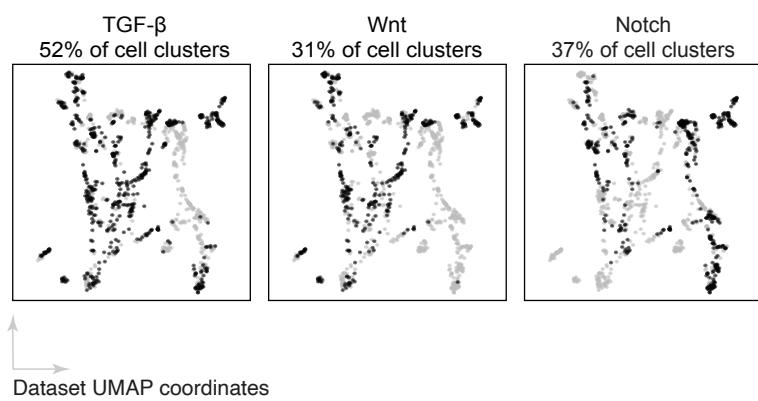
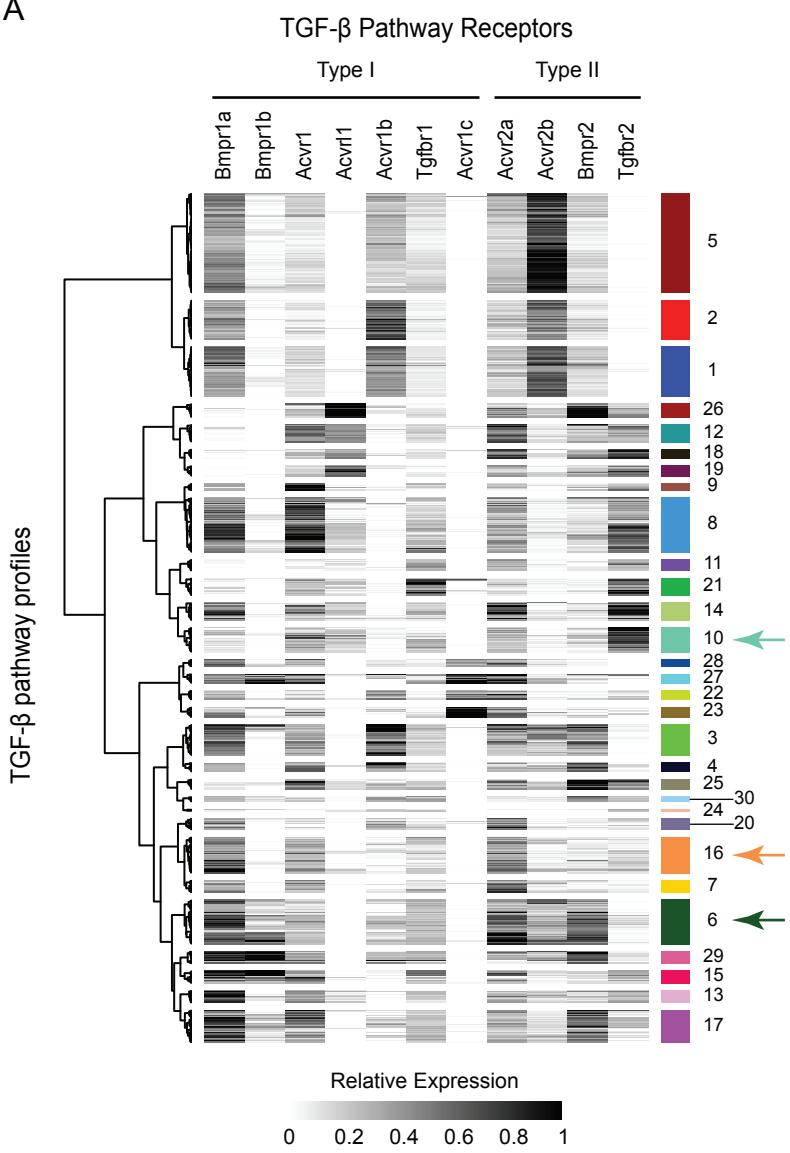


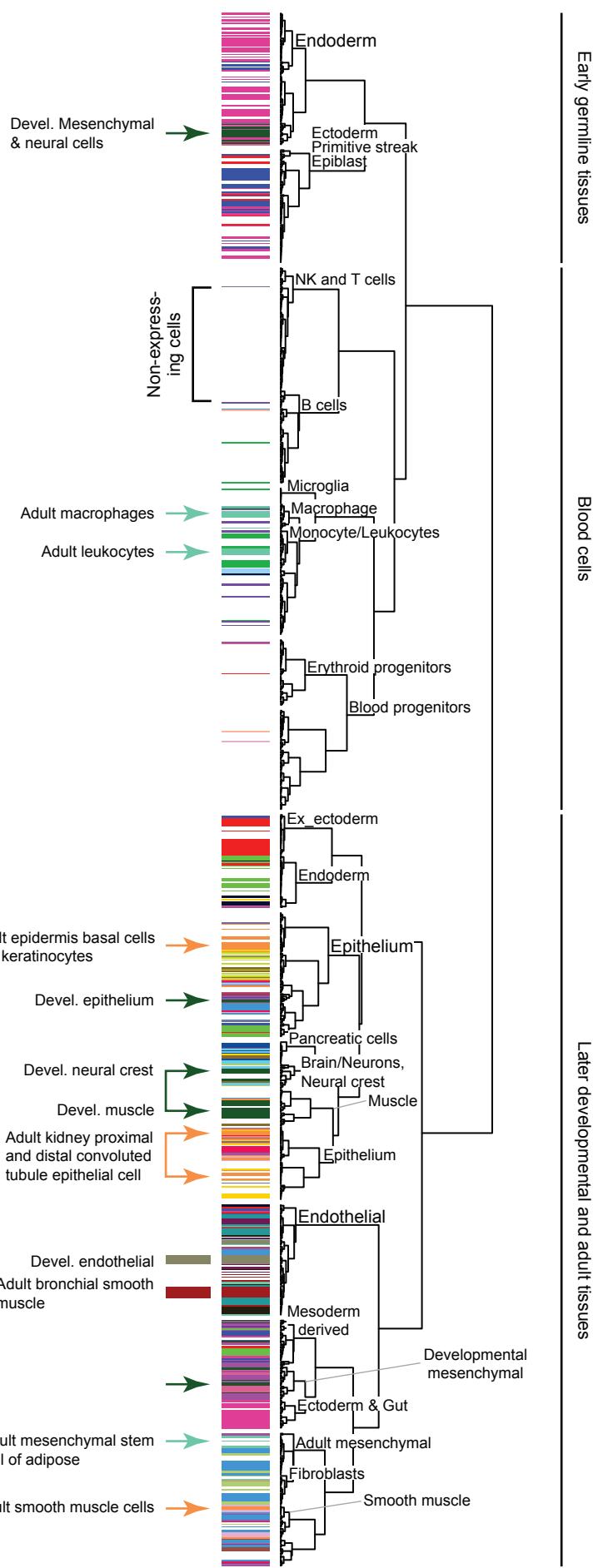
Figure 2: TGF- β Receptors exhibit distinct and recurrent pathway expression profiles

A



C

Global distribution of pathway profiles



B

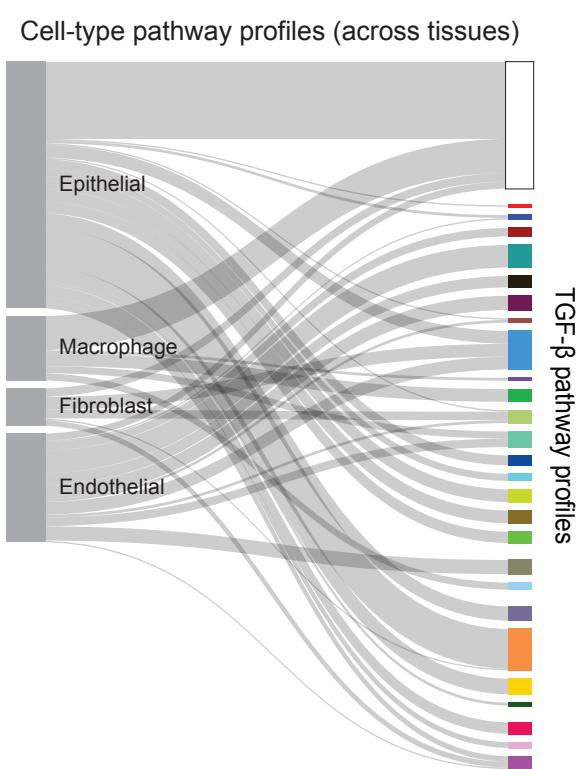
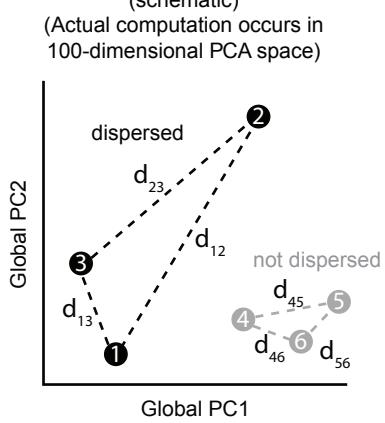
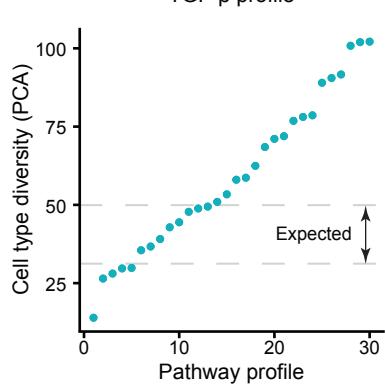


Figure 3: TGF- β expression motifs are dispersed across cell types and organs

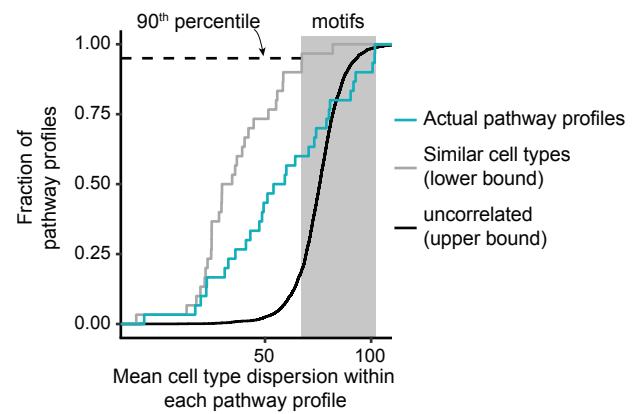
A Pairwise distance computation (schematic)
(Actual computation occurs in 100-dimensional PCA space)



B Number of cell types with TGF- β profile

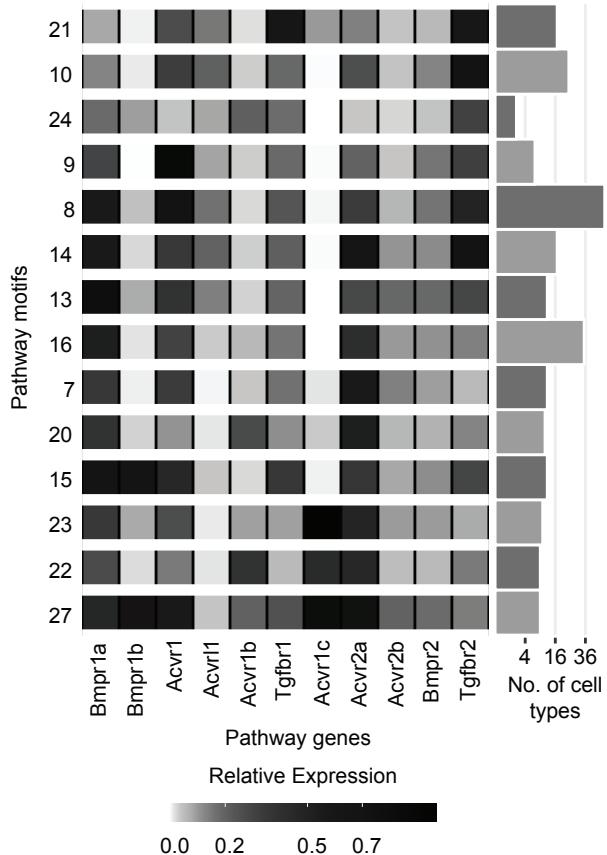


B



D

Broadly Dispersed TGF- β Motifs



E

Broadly Dispersed TGF- β Motifs

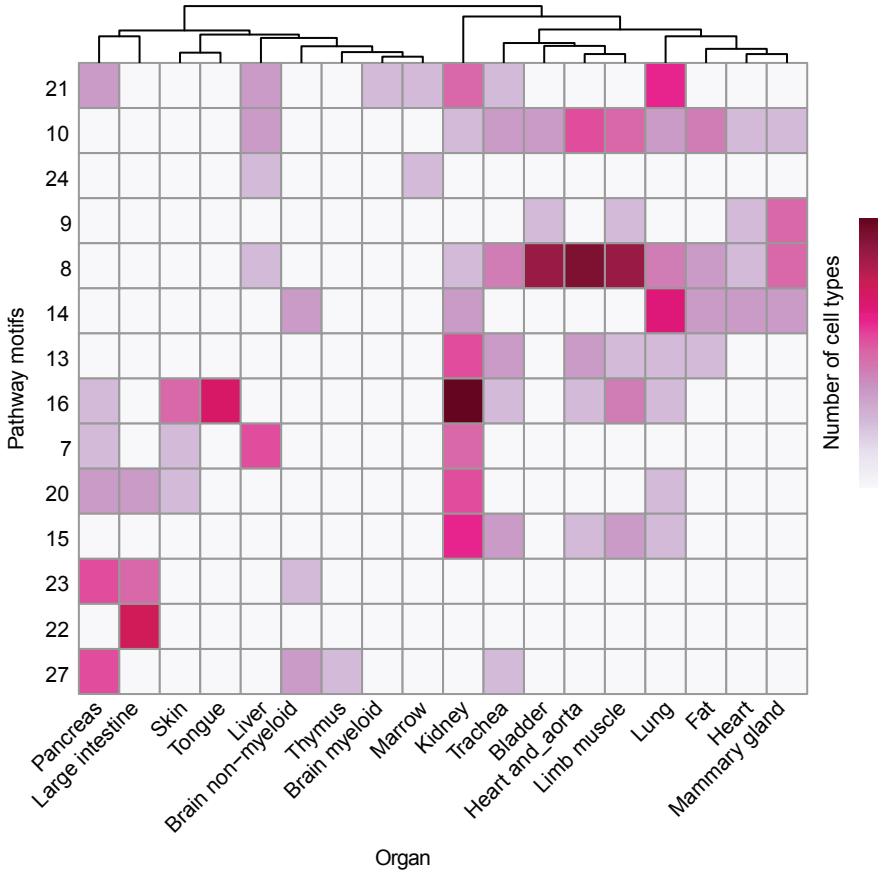
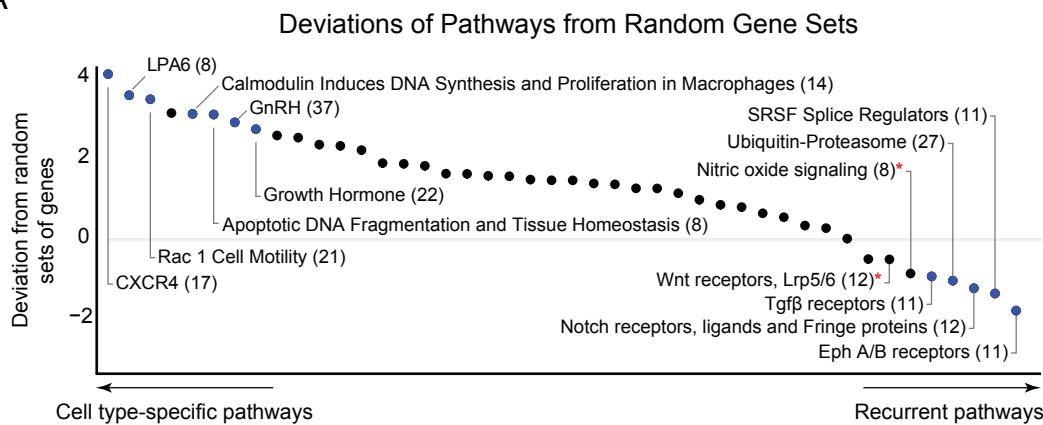
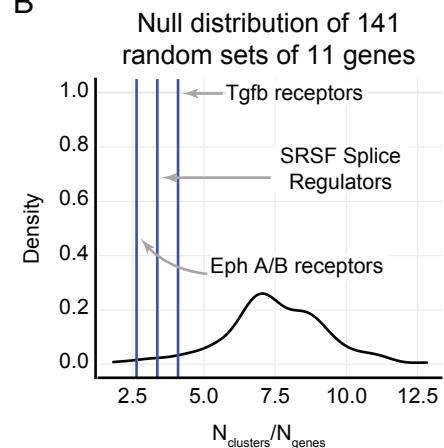


Figure 4: Wnt and Notch also show broadly dispersed recurrent pathway expression motifs

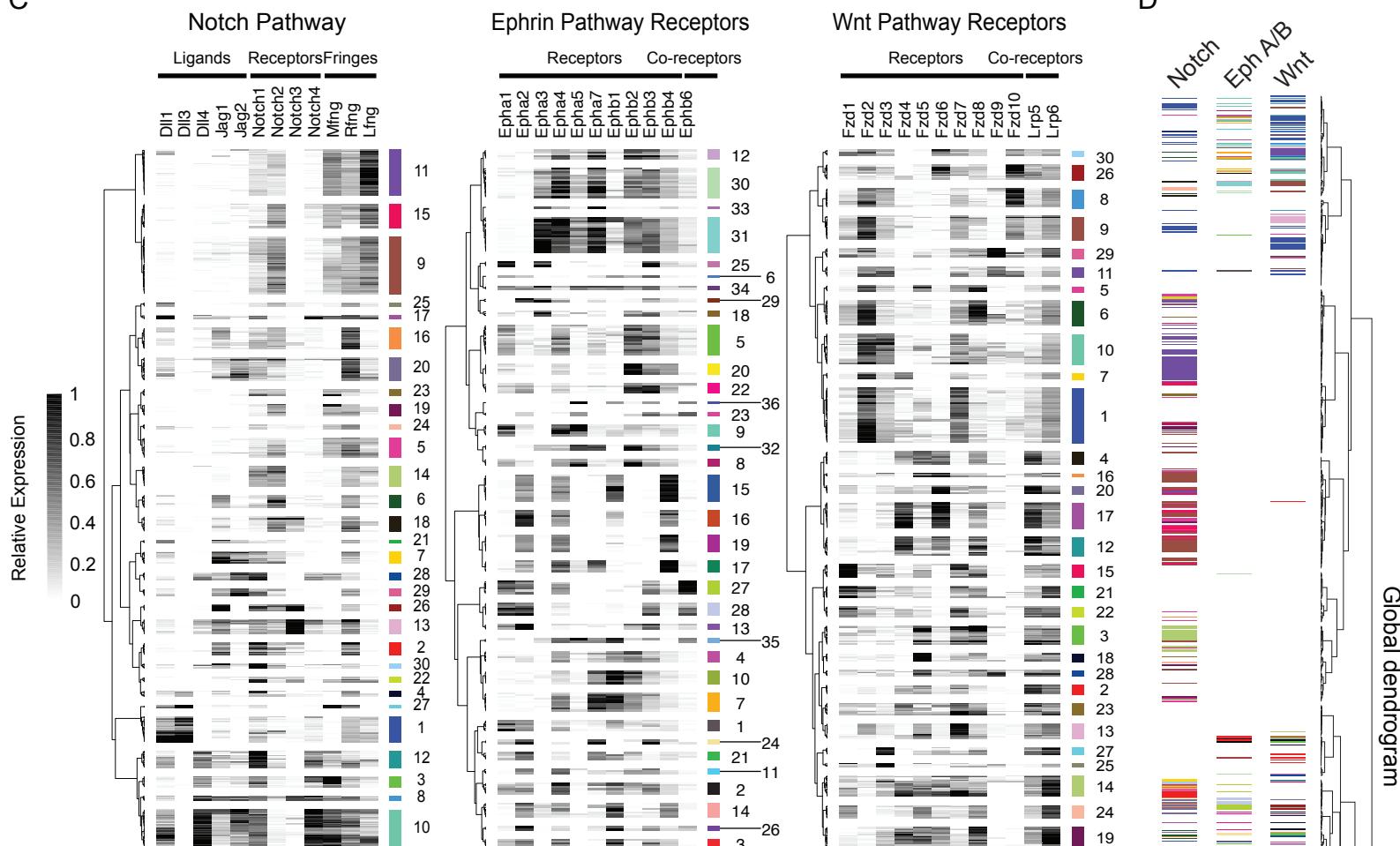
A



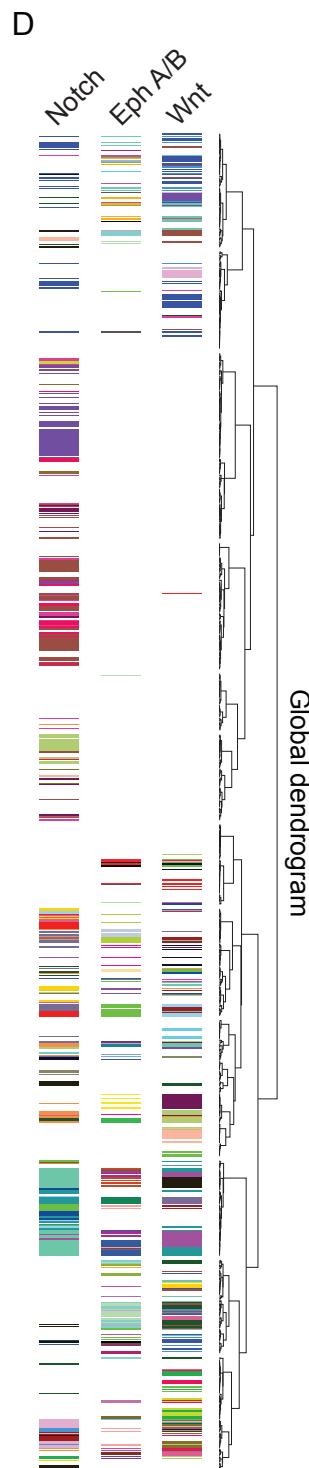
B



C



D



F

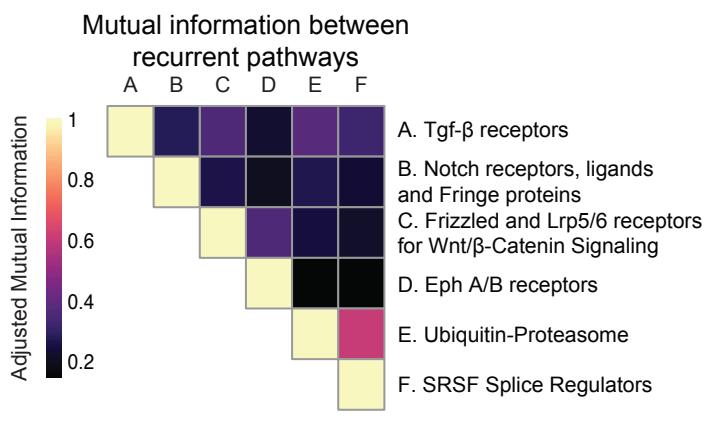


Figure 5:

TGF- β and Notch show distinct dynamics in neural crest differentiation

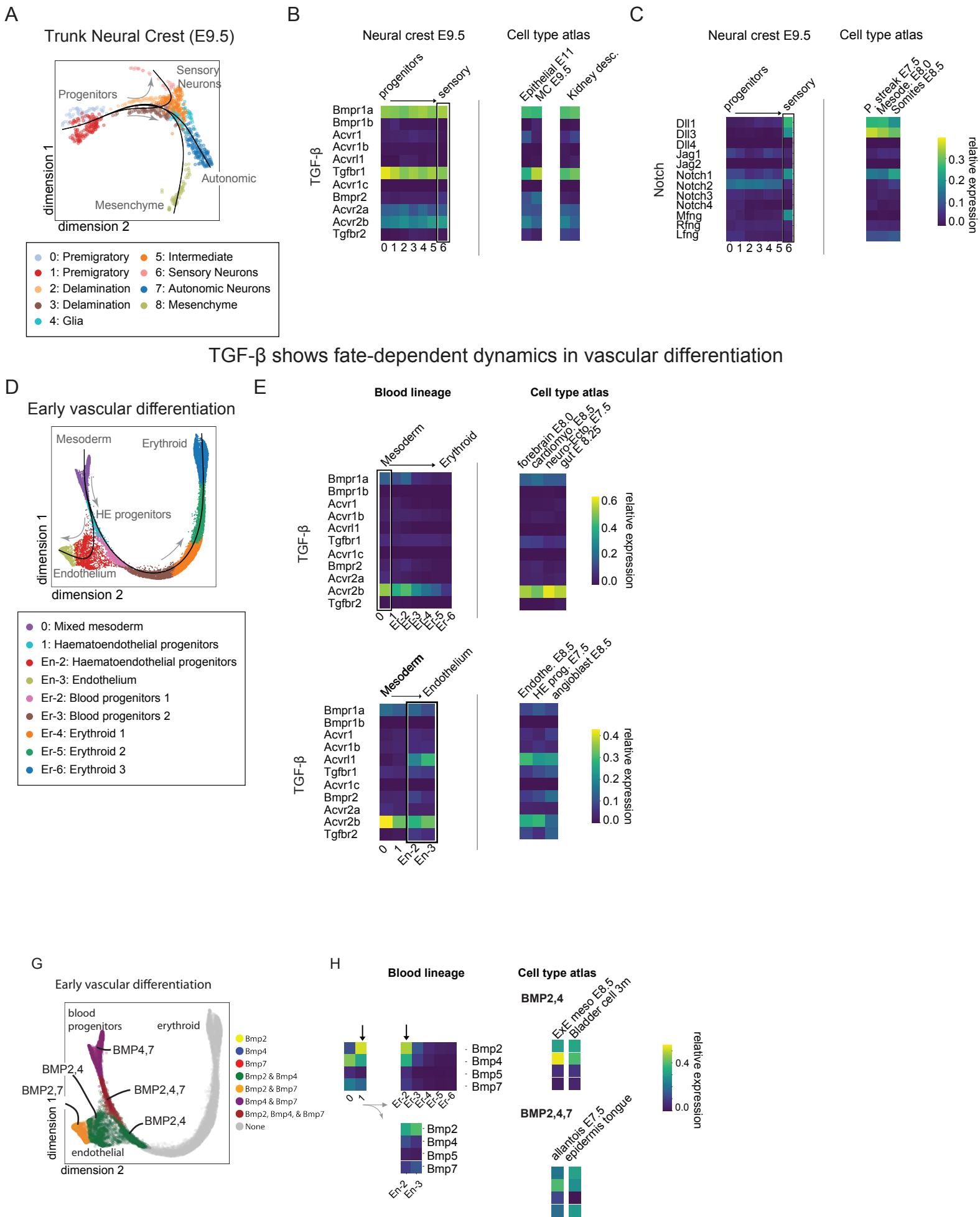
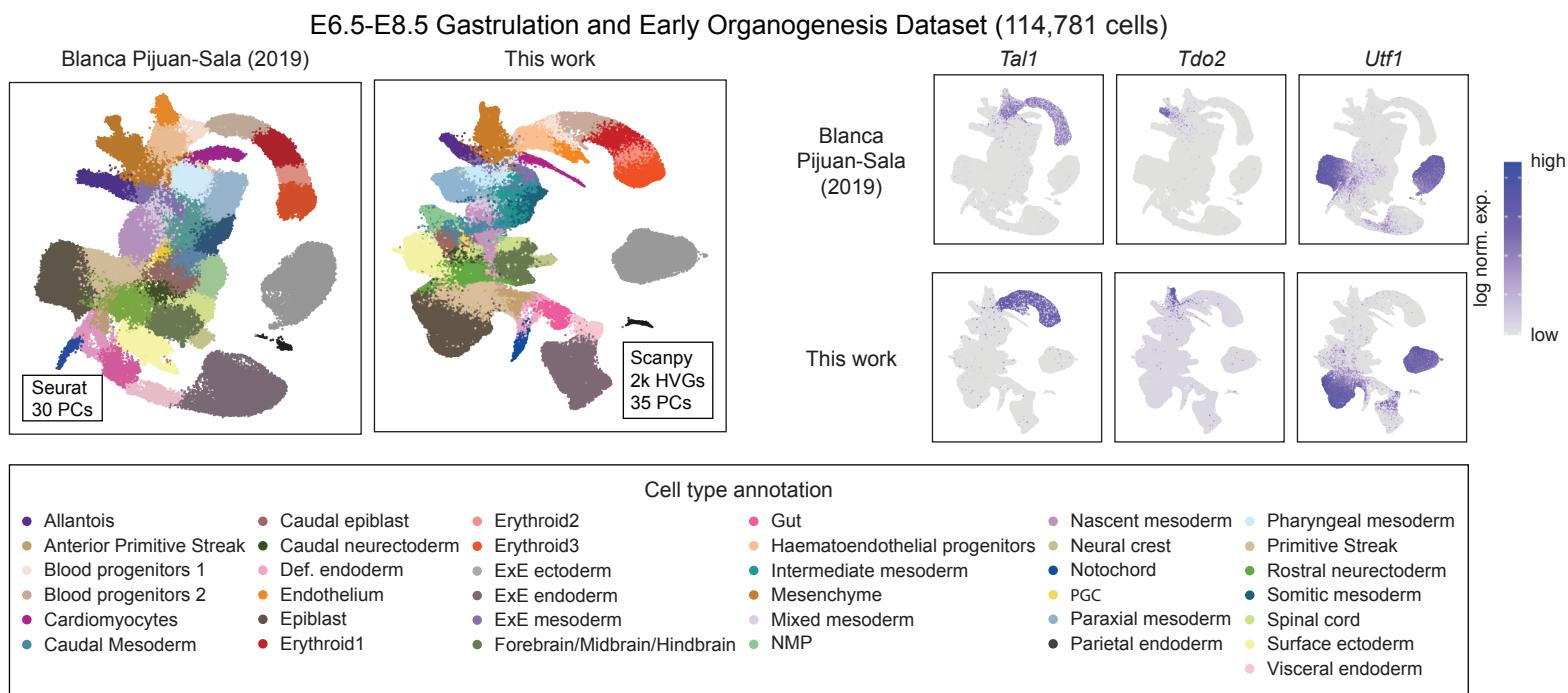


Figure 1, Supplement 1

A



B

Distance to centroid within adult cell types (Euclidean distance in 30 PCs)

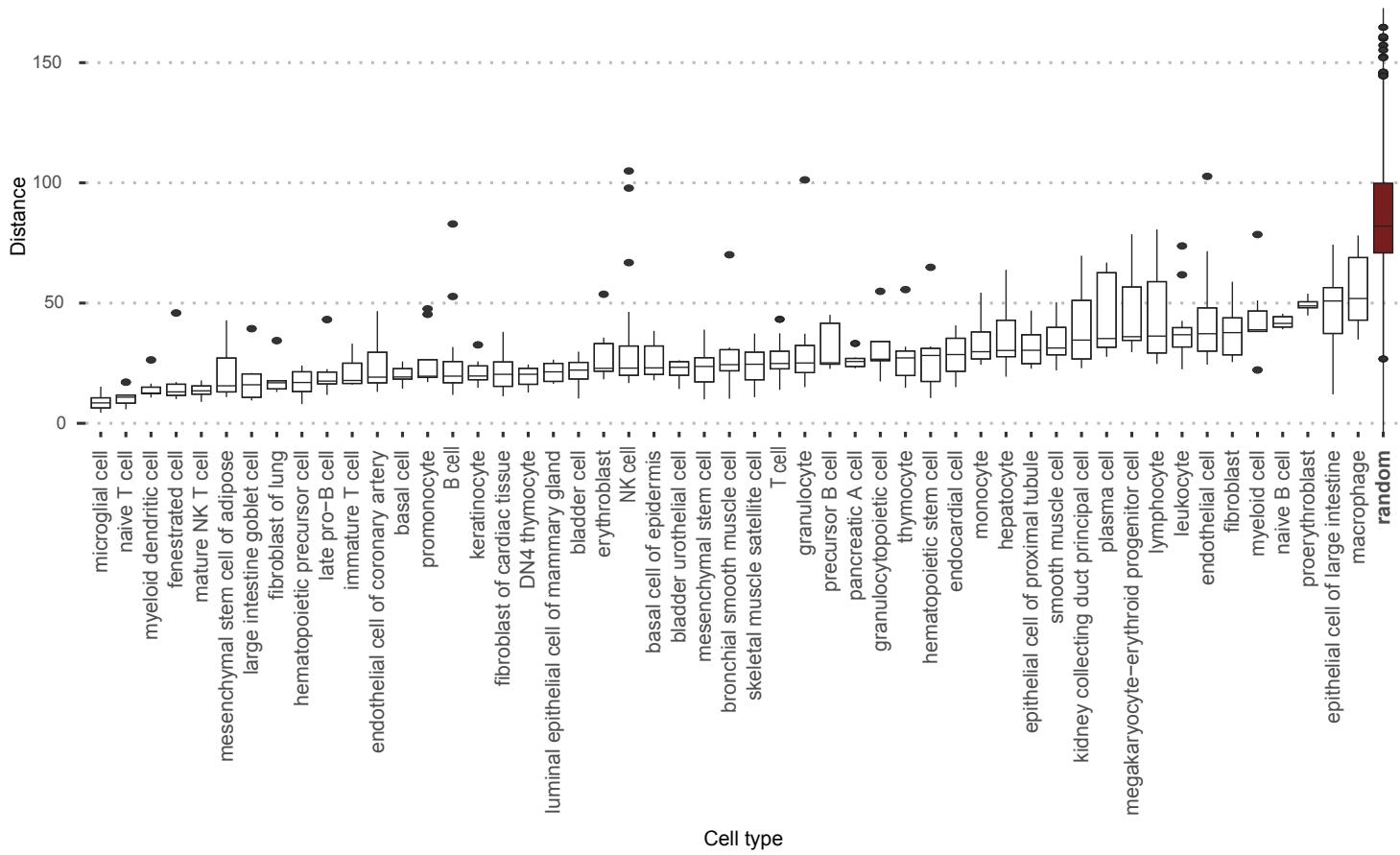
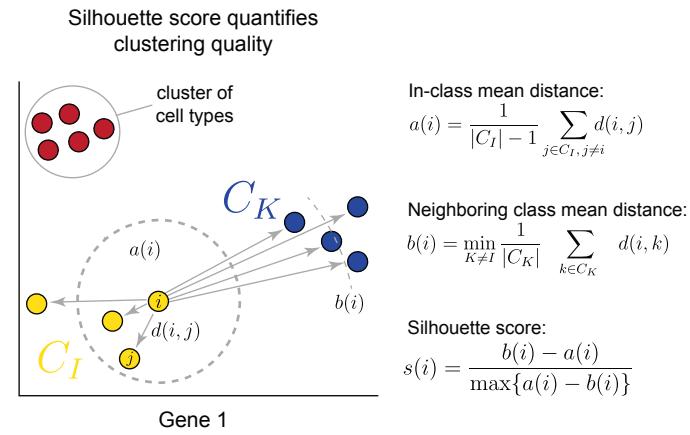


Figure 2, Supplement 1

A



B

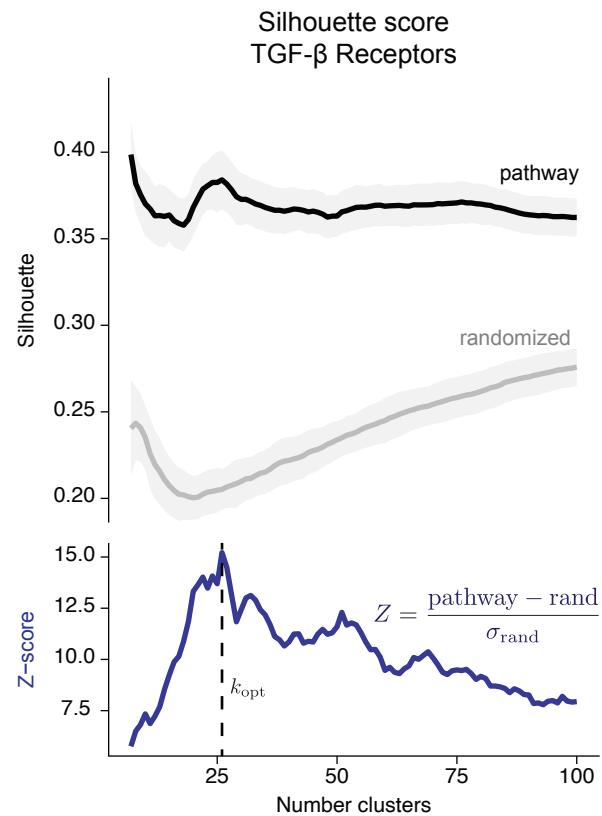
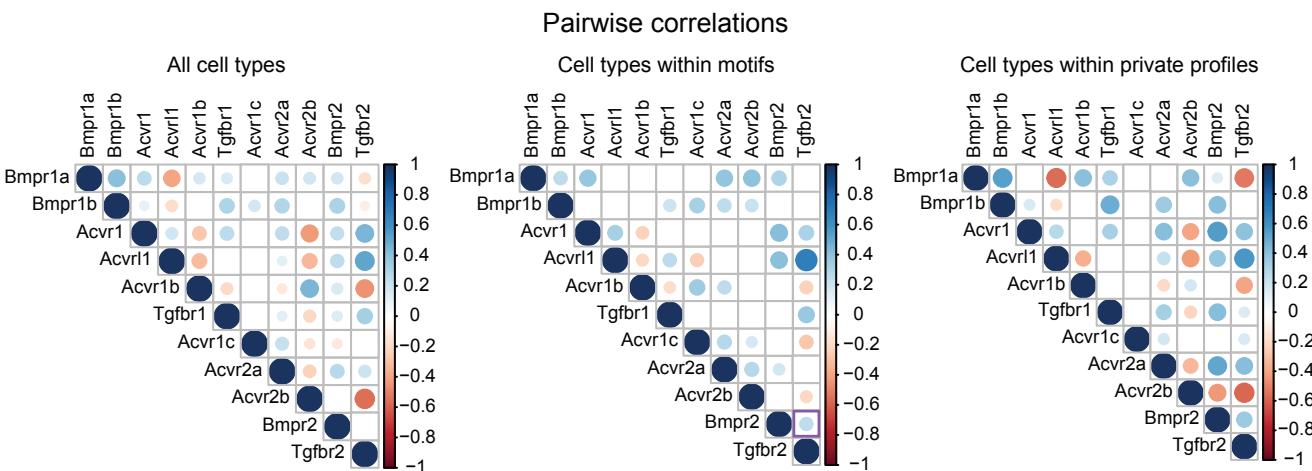


Figure 3 Supplement 1

A



B

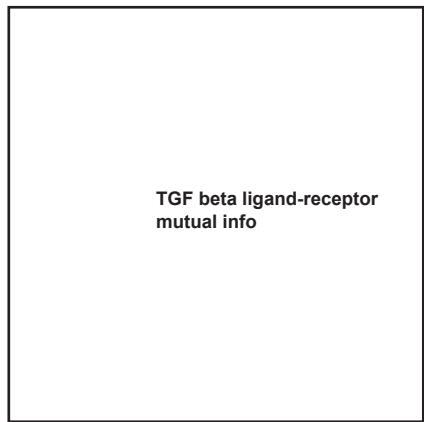
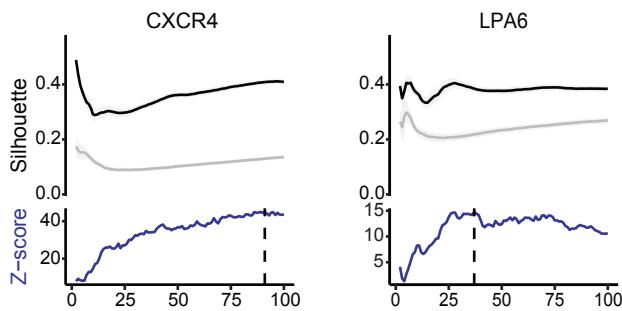
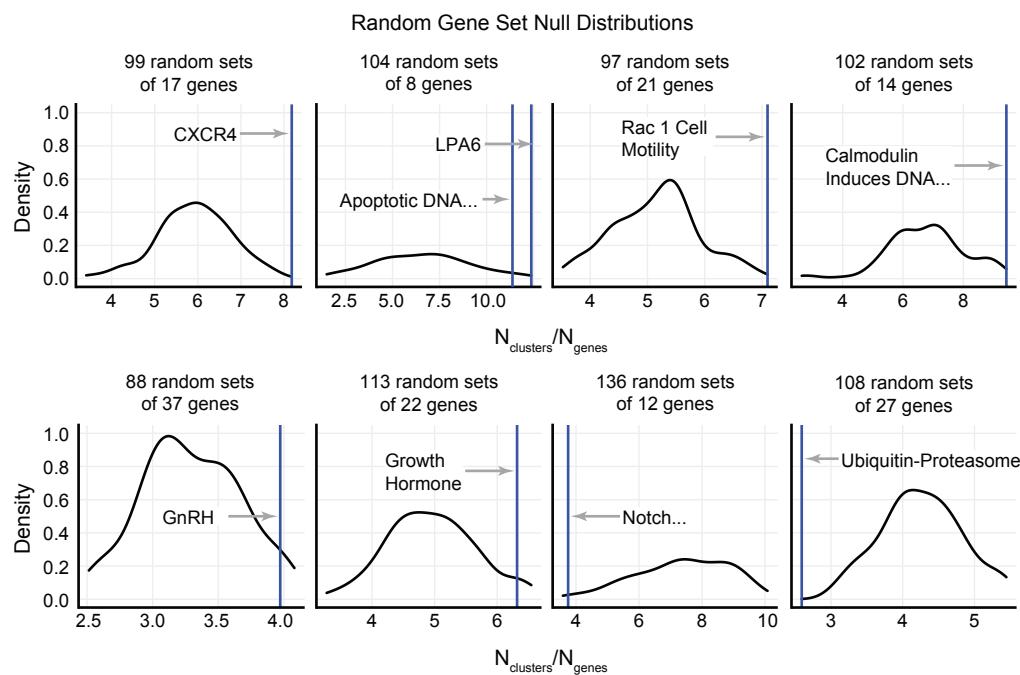


Figure 4 Supplement 1

A



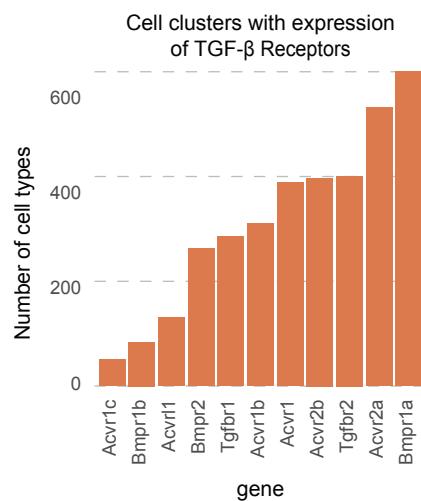
B



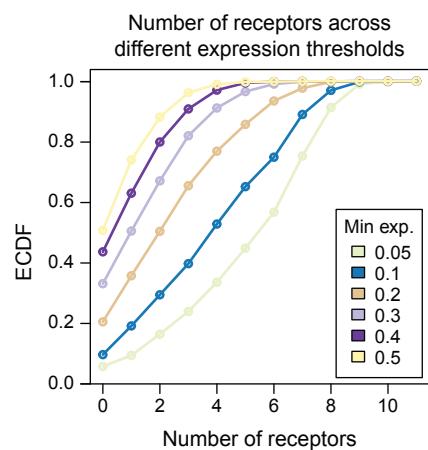
Put silhouette plots first (group by recurrent vs. not) then the null distribution plots as B

Figure 2, Supplement 2

A



B



C

