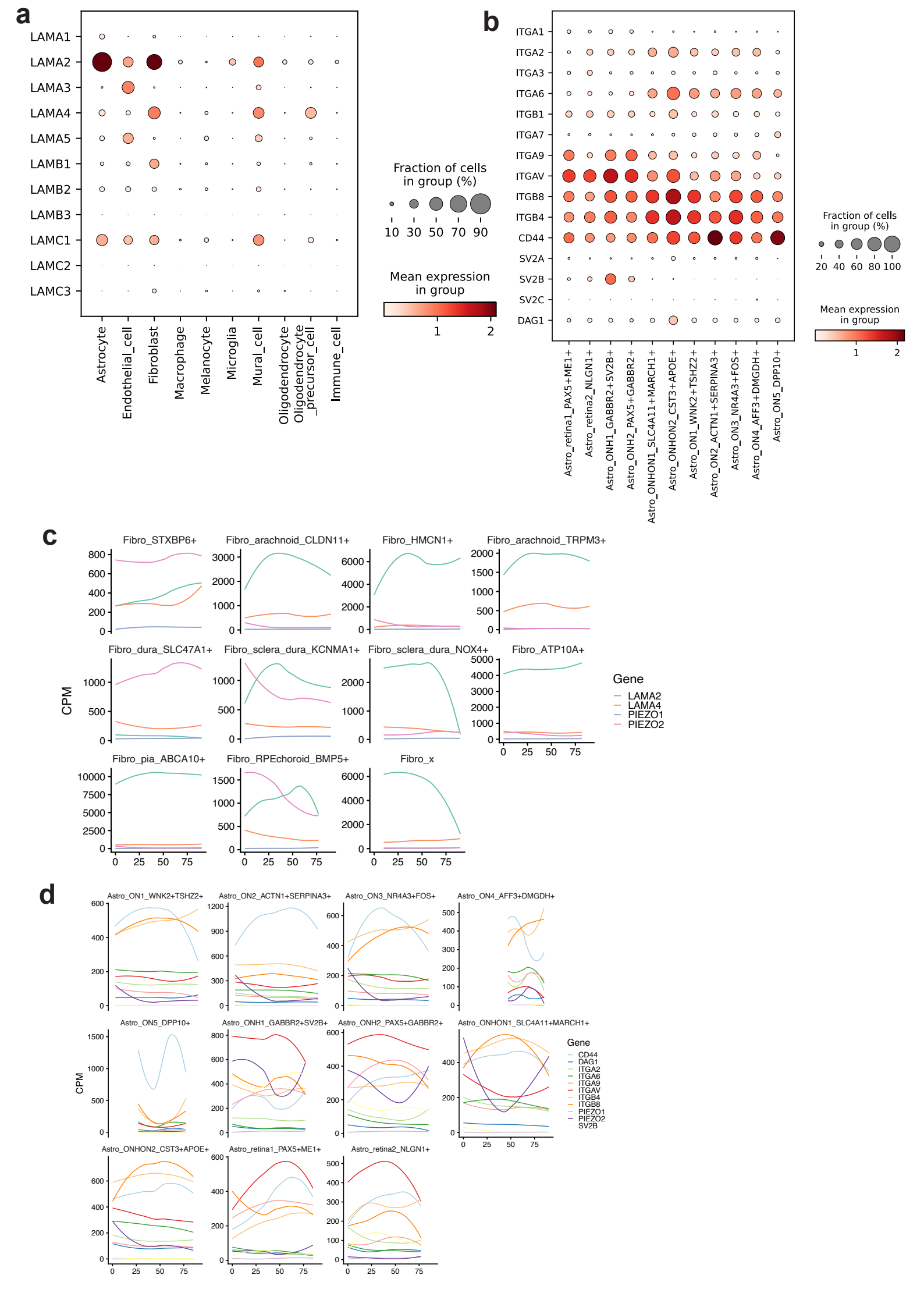
a
LAMA1
LAMA2
LAMA3
LAMA4
LAMA5
LAMB1
LAMB2
LAMB3
LAMC1
LAMC2
LAMC3
Astrocyte
Endothelial_cell
Fibroblast
Macrophage
Melanocyte
Microglia
Mural_cell
Oligodendrocyte
Oligodendrocyte_precursor_cell
Immune_cell
Fraction of cells in group (%)
10 30 50 70 90
Mean expression in group
1 2
b
ITGA1
ITGA2
ITGA3
ITGA6
ITGB1
ITGA7
ITGA9
ITGAV
ITGB8
ITGB4
CD44
SV2A
SV2B
SV2C
DAG1
Astro_retina1_PAX5+ME1+
Astro_retina2_NLGN1+
Astro_ONH1_GABBR2+SV2B+
Astro_ONH2_PAX5+GABBR2+
Astro_ONHON1_SLC4A11+MARCH1+
Astro_ONHON2_CST3+APOE+
Astro_ON1_WNK2+TSHZ2+
Astro_ON2_ACTN1+SERPINA3+
Astro_ON3_NR4A3+FOS+
Astro_ON4_AFF3+DMGDH+
Astro_ON5_DPP10+
Fraction of cells in group (%)
20 40 60 80 100
Mean expression in group
1 2
c
Fibro_STXBP6+
Fibro_arachnoid_CLDN11+
Fibro_HMCN1+
Fibro_arachnoid_TRPM3+
Fibro_dura_SLC47A1+
Fibro_sclera_dura_KCNMA1+
Fibro_sclera_dura_NOX4+
Fibro_ATP10A+
Fibro_pia_ABCA10+
Fibro_RPEchoroid_BMP5+
Fibro_x
CPM
Gene
LAMA2
LAMA4
PIEZO1
PIEZO2
d
Astro_ON1_WNK2+TSHZ2+
Astro_ON2_ACTN1+SERPINA3+
Astro_ON3_NR4A3+FOS+
Astro_ON4_AFF3+DMGDH+
Astro_ON5_DPP10+
Astro_ONH1_GABBR2+SV2B+
Astro_ONH2_PAX5+GABBR2+
Astro_ONHON1_SLC4A11+MARCH1+
Astro_ONHON2_CST3+APOE+
Astro_retina1_PAX5+ME1+
Astro_retina2_NLGN1+
CPM
Gene
CD44
DAG1
ITGA2
ITGA6
ITGA9
ITGAV
ITGB4
ITGB8
PIEZO1
PIEZO2
SV2B

Extended Data Figure 7. Ligand receptor expression in LAMININ-mediated signaling pathway

a, Dot plot showing gene expression of LAMININ ligand genes across cell classes. **b**, Dot plot showing expression of LAMININ receptor genes across astrocyte populations. **c**, Expression (Y-axis) of LAMININ ligand genes and mechanosensor genes associated with age (X-axis) in fibroblast populations. **d**, Expression (X-axis) of LAMININ receptor genes and mechanosensor genes with age (Y-axis) in astrocyte populations.