Supplemental Data

The Amyloid-beta rich CNS environment alters myeloid cell functionality independent of their origin

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Figure S1

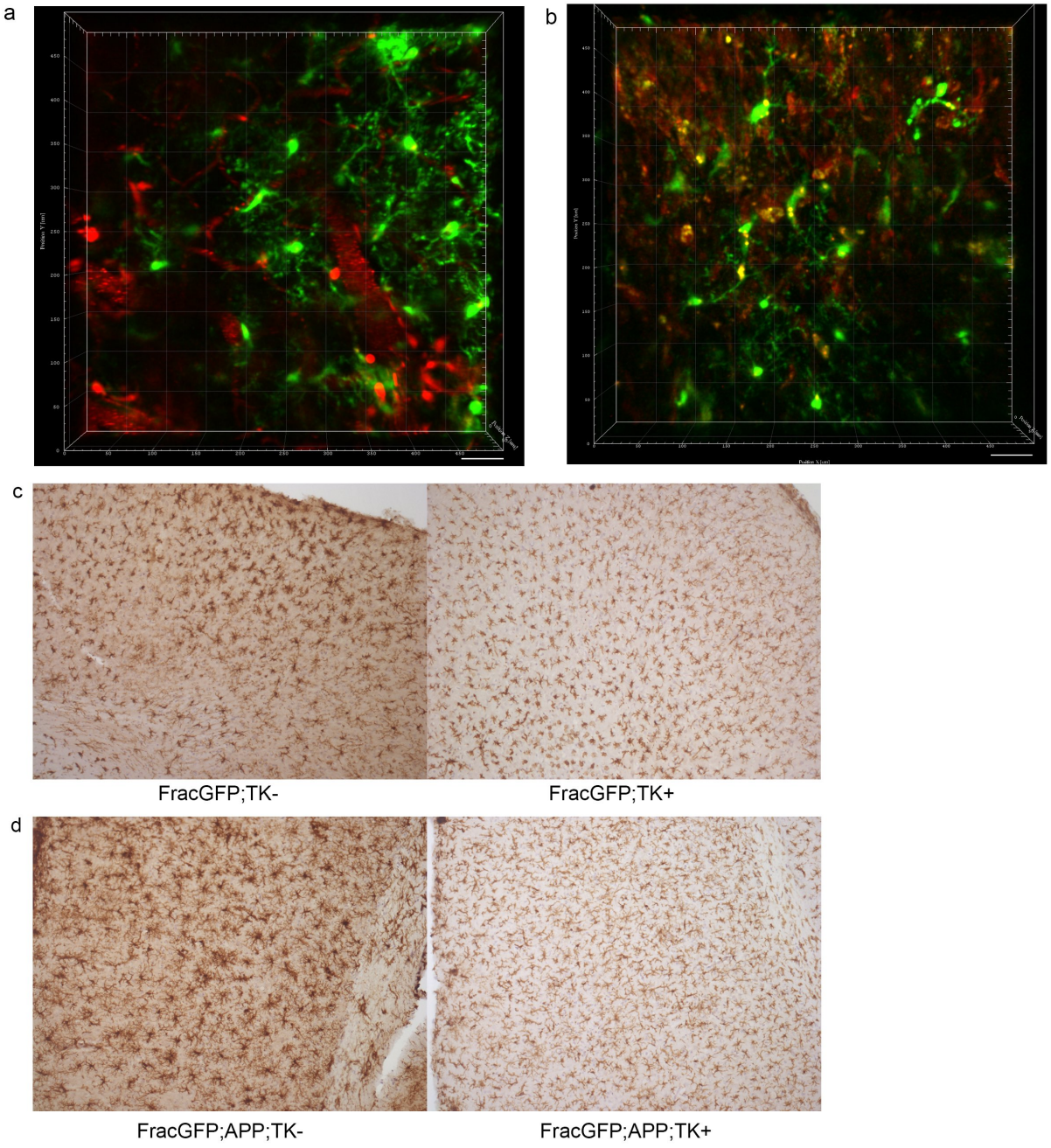

Figure S1. Microglia morphology and distribution. (a, b) 3D images created with Imaris representing microglia (a) and PDMC (b) morphology at day 6 of imaging. (c, d) Iba1+ cell distribution and morphology throughout the cortex in the different animal models used.

Figure S2

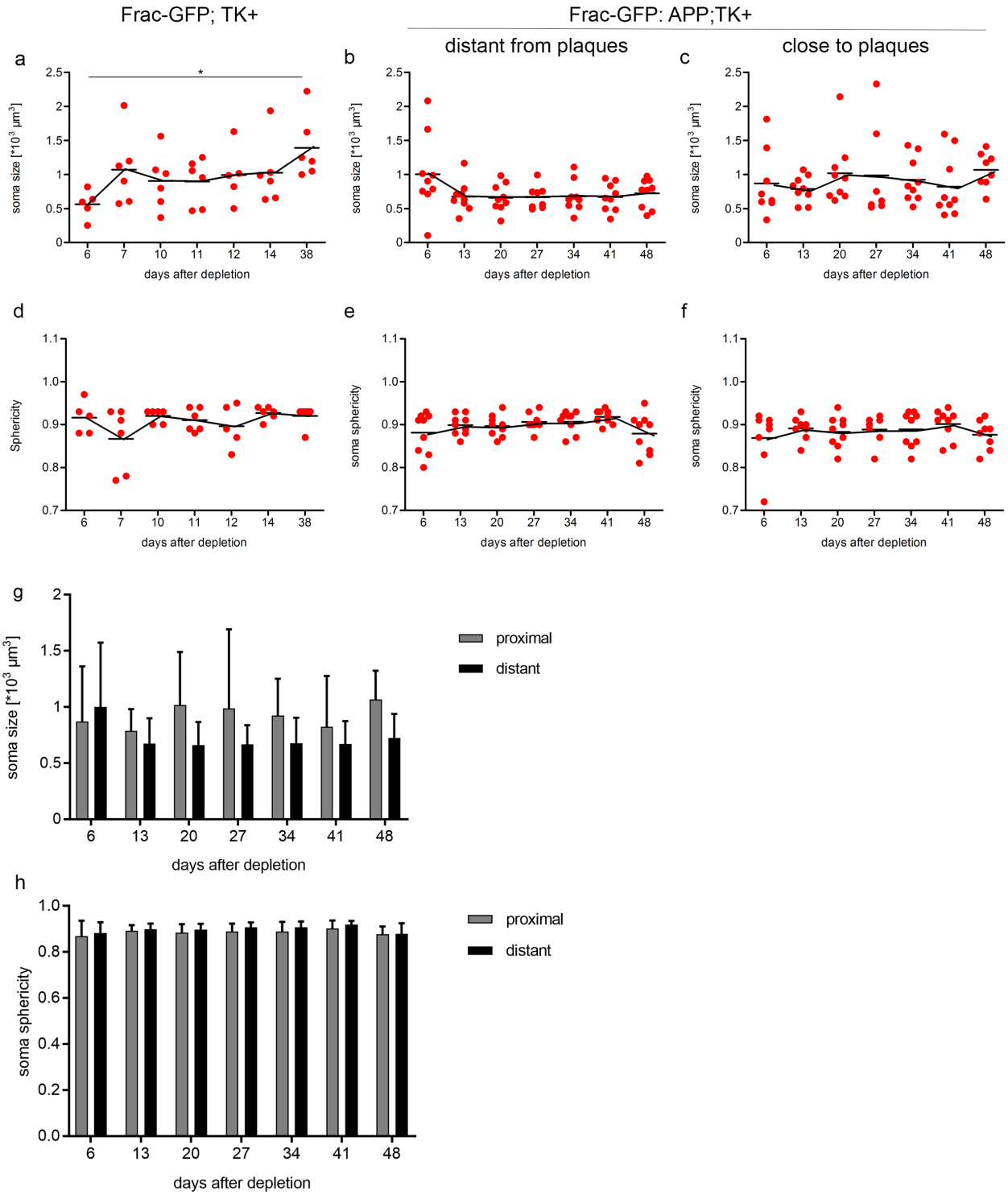

Fig. S2 Soma morphology assessment over time. Two morphological parameters assessed for the PDMCs of each of the indicated genotypes for each time point after surgery: (a-c) soma size, (d-f) soma sphericity. Statistics: 1-way ANOVA, with Tukey's post-hoc test. * $p<0.05$. (g, h) comparison of proximal and distant PDMCs in APP animals over time. Statistics: 2-way ANOVA.

Figure S3

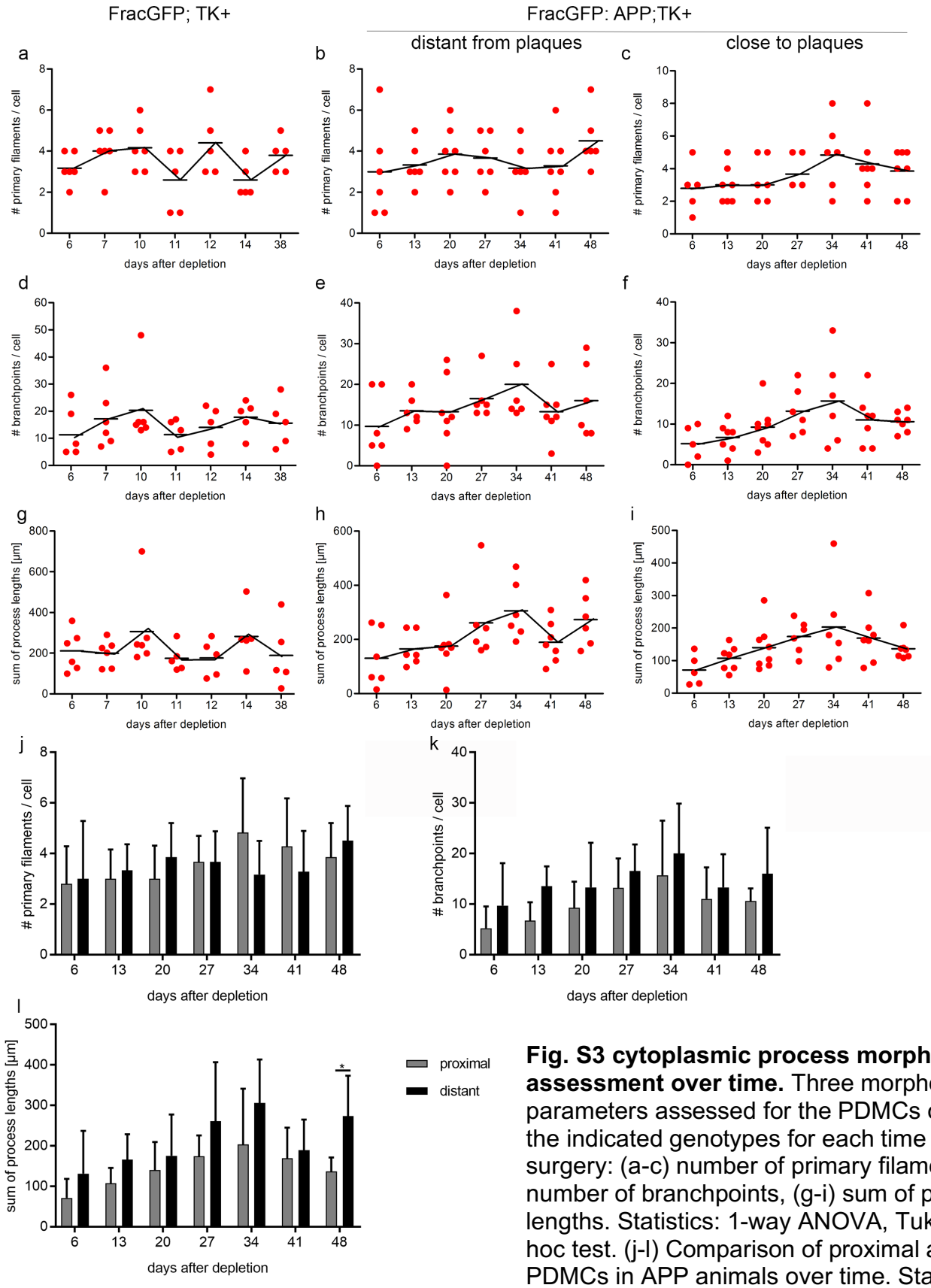

Fig. S3 cytoplasmic process morphology assessment over time. Three morphological parameters assessed for the PDMCs of each of the indicated genotypes for each time point after surgery: (a-c) number of primary filaments, (d-f) number of branchpoints, (g-i) sum of protrusion lengths. Statistics: 1-way ANOVA, Tukey's post-hoc test. (j-l) Comparison of proximal and distant PDMCs in APP animals over time. Statistics: 2-way ANOVA. * $p < 0.05$.

Figure S4

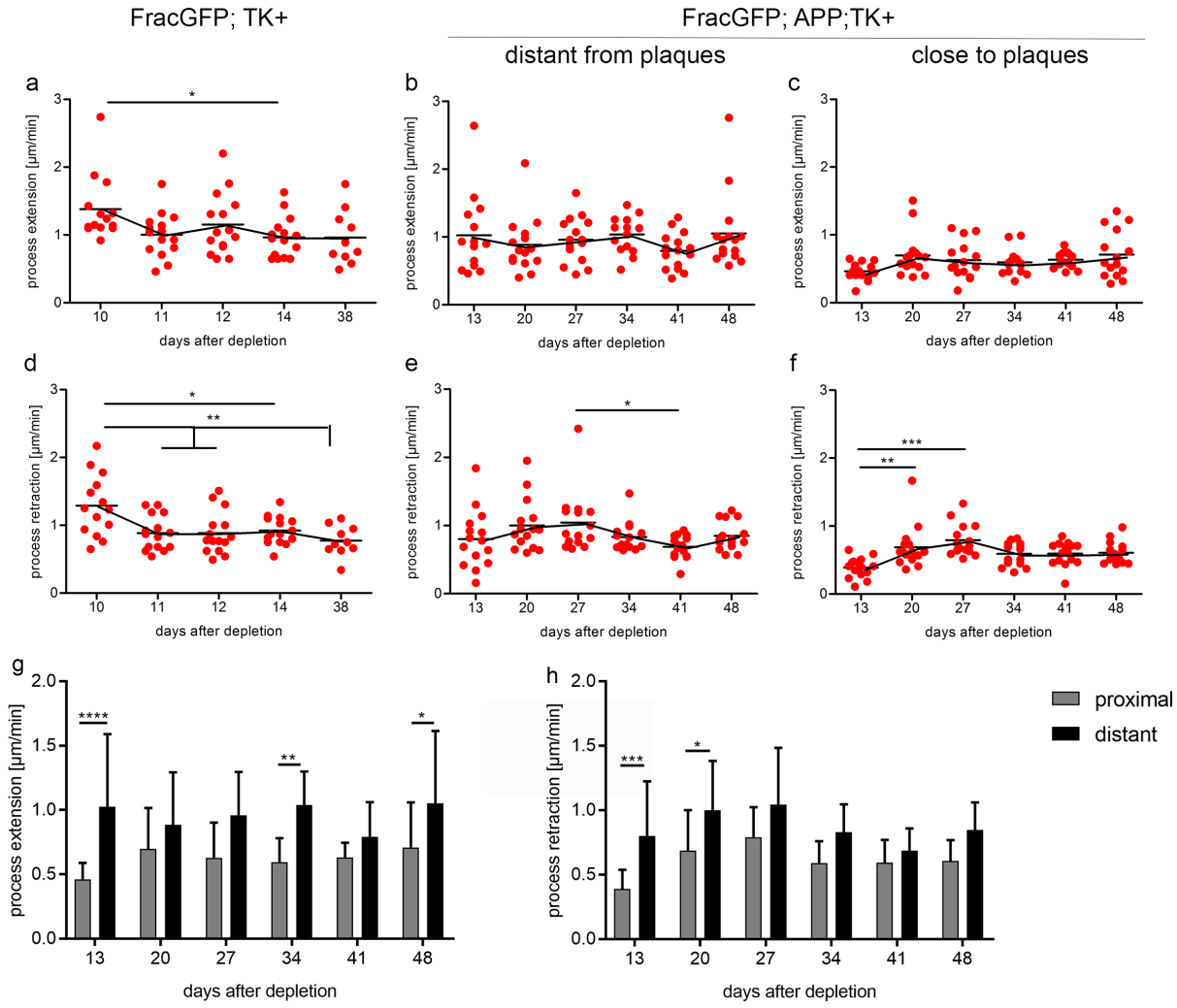

Fig. S4 cytoplasmic process activity assessment over time. Both process extension (a-c) as well as process retraction (d-f) were assessed for the PDMCs of each of the indicated genotypes for each time point after surgery. Statistics: 1-way ANOVA, Tukey's post-hoc test. * $p<0.05$, ** $p<0.01$, *** $p<0.001$. (g,h) Comparison of proximal and distant PDMCs in APP animals over time. Statistics: 2-way ANOVA. * $p < 0.05$, *** $p<0.001$, **** $p<0.0001$.

Supplementary Movie 1. Day 6 after surgery.

Animation of the 3D image of a field of view 6 days after surgery, displaying homeostatic GFP+ microglia.

Supplementary Movie 2. Day 24 after surgery.

Animation of the 3D image of a field of view 24 days after surgery, displaying homeostatic GFP+ microglia.

Supplementary Movie 3. Microglia response to laser lesion in FracGFP;TK- animals

Time lapse of 28 minutes of the microglia response to a laser lesion in FracGFP;TK- animals.

Supplementary Movie 4. PDMC response to laser lesion in FracGFP;TK+ animals

Time lapse of 28 minutes of the PDMC response to a laser lesion in FracGFP;TK+ animals.

Supplementary Movie 5. Microglia response to laser lesion in FracGFP;APP+;TK- animals

Time lapse of 28 minutes of the microglia response to a laser lesion in FracGFP;APP;TK- animals.

Supplementary Movie 6. PDMC response to laser lesion in FracGFP;APP+;TK+ animals

Time lapse of 28 minutes of the PDMC response to a laser lesion in FracGFP;APP;TK+ animals.