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Supplemental Information

Familial Alzheimer's Disease Mutations in *PSEN1*

Lead to Premature Human Stem Cell Neurogenesis

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Figure S1

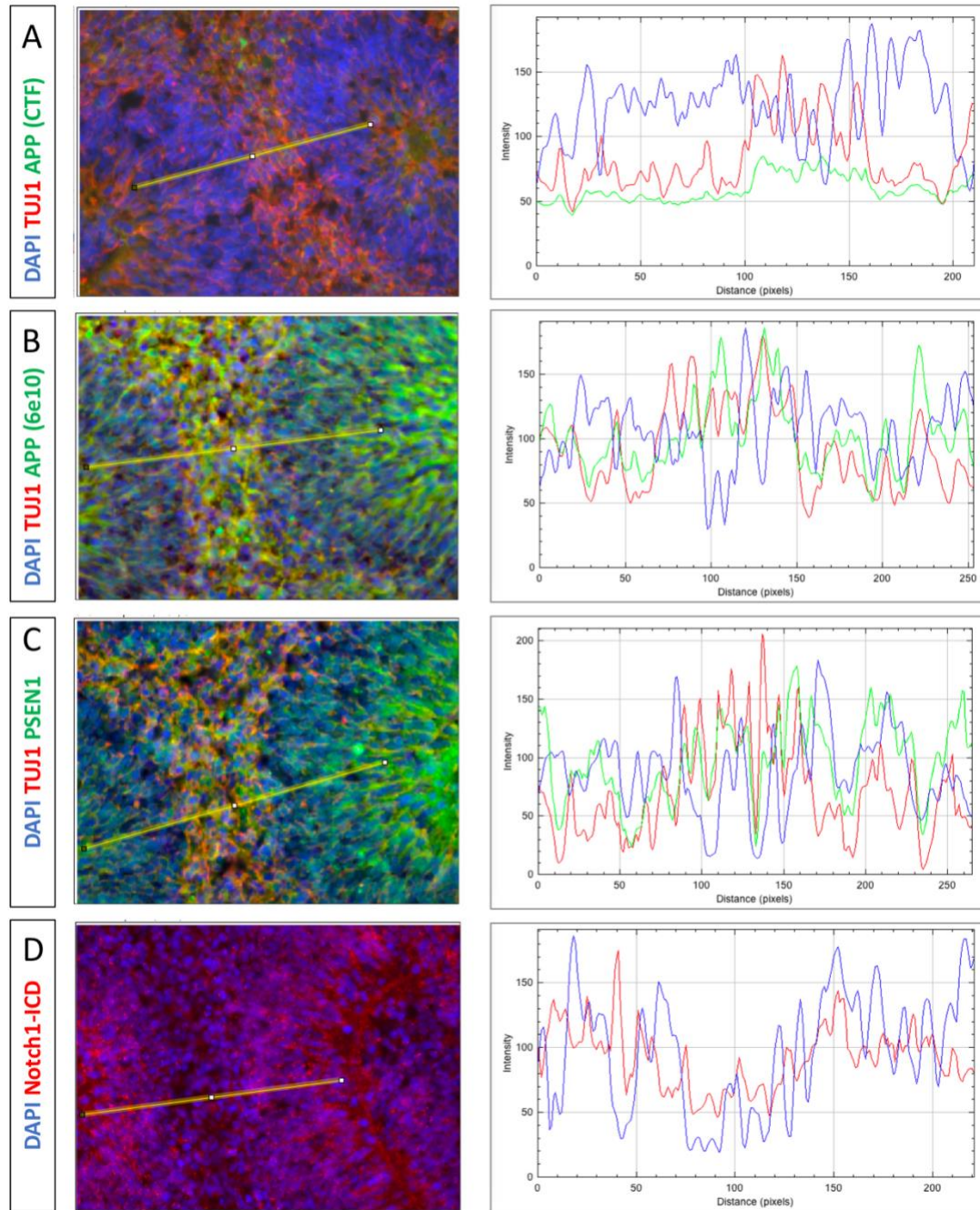


Fig S1 – Intensity analysis of images in Fig 1B.

A-B) APP immunostaining (C terminal fragment and 6E10 recognising A β) shows increased intensity in the neural regions (marked by TUJ1). C) PSEN1 immunostaining shows a more homogeneous expression across pro-neural and neural regions. D) Notch intracellular domain (Notch ICD) is enriched in neural progenitor regions. A-D are adjacent sections.

Figure S2

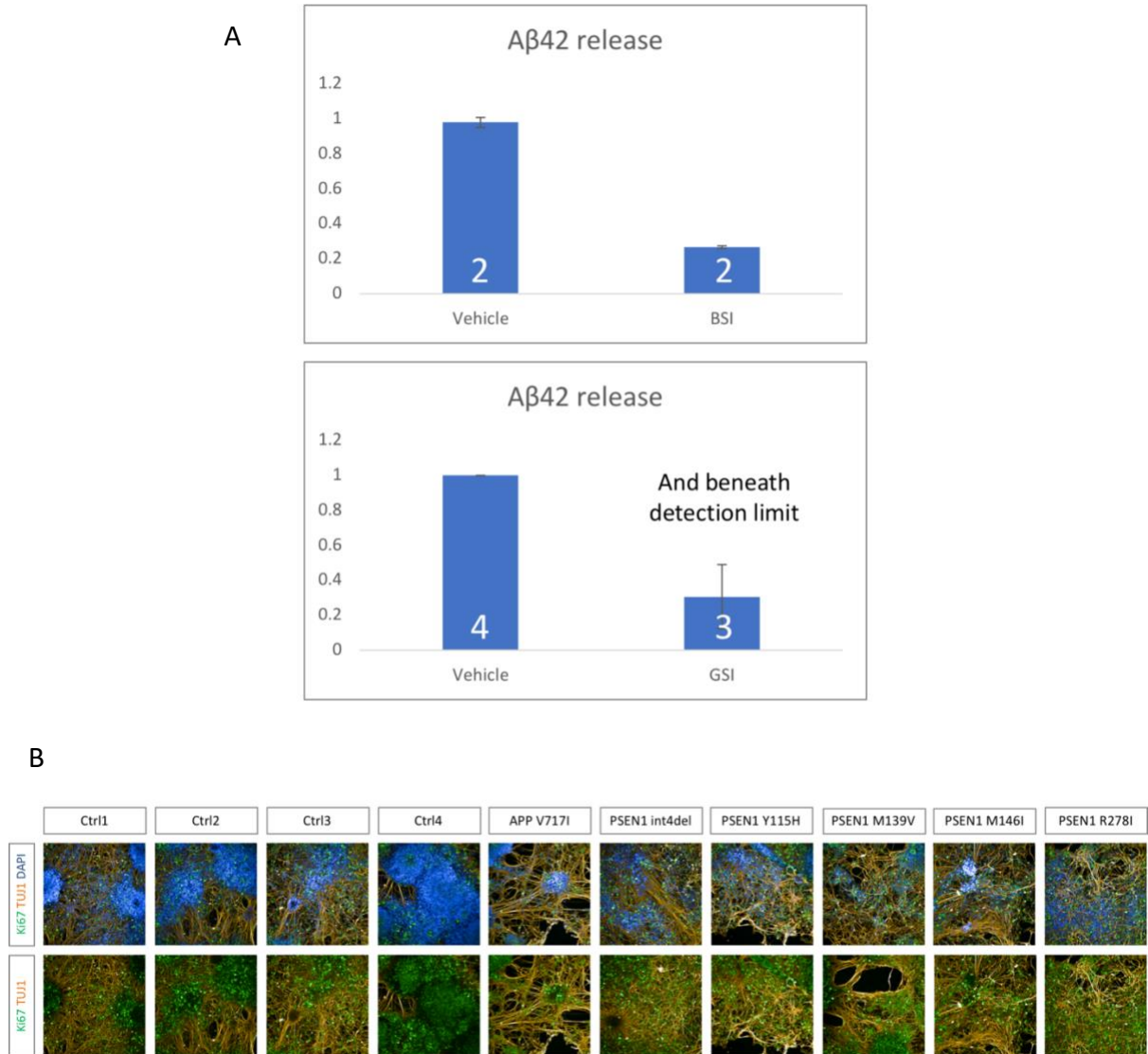


Figure S2 – Aβ42 ELISA and images of all iPSC lines at 27 DIV.

A) ELISA measurement of Aβ42 release from neuronal cultures to confirm the action of β- and γ-secretase inhibitors (see Fig 2). B) Representative images of all lines at day 27 of induction, used for quantification of Ki67 proliferating progenitors and TUJ1 post-mitotic neurons (see Fig 3).

Figure S3

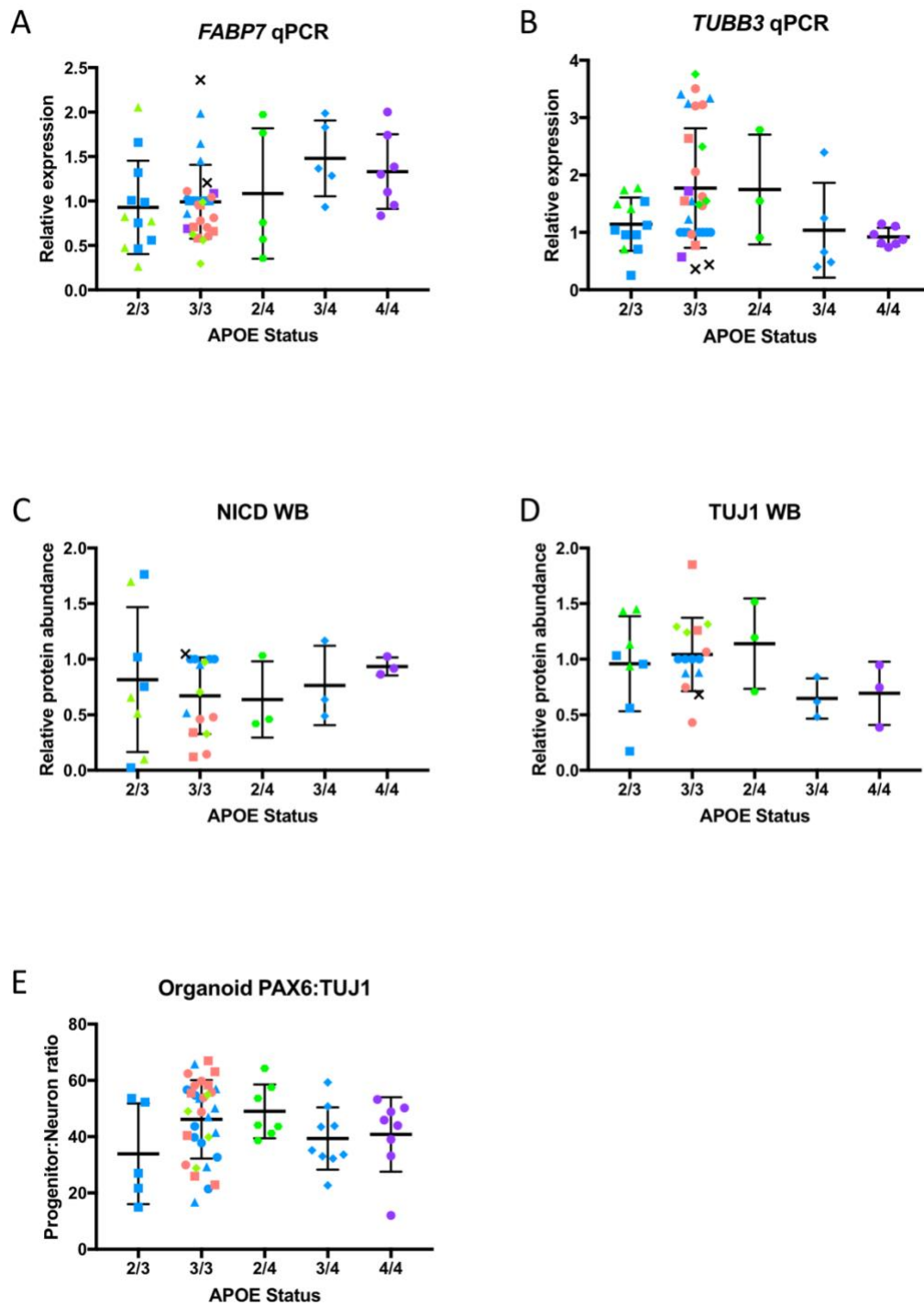


Figure S3 – Data from Fig 3 and Fig 4 regrouped via APOE genotype.

Symbols: Ctrl1 – blue circles. Ctrl2 – blue squares. Ctrl3 – blue triangles. Ctrl4 – blue diamonds. hESC – black crosses. *APP* V717I – purple circles. *PSEN1* int4del – pink circles. *PSEN1* Y115H – pink squares. *PSEN1* M139V – green triangles. *PSEN1* M146I – green diamonds. *PSEN1* R278I – green hexagons.

Figure S4

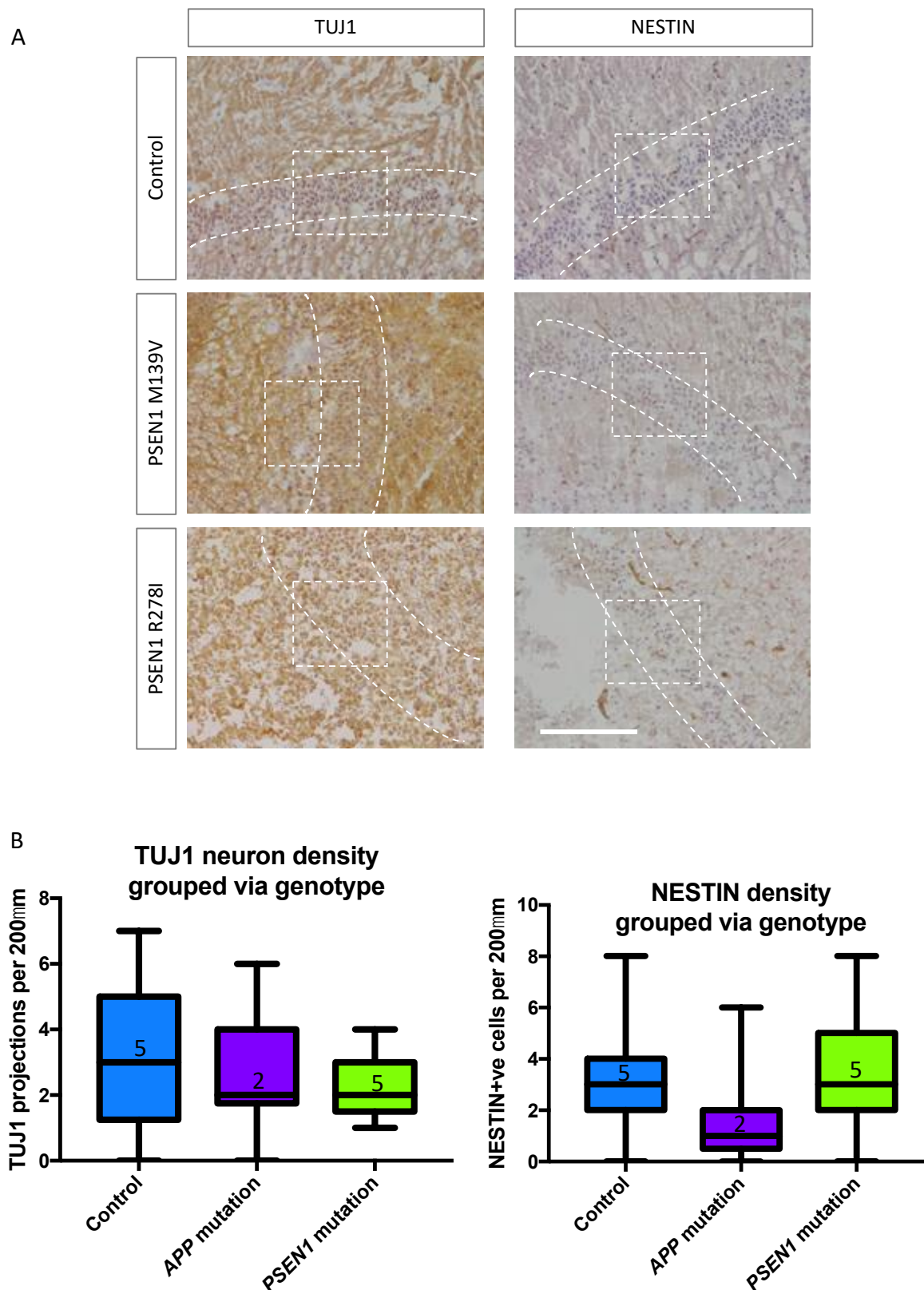


Figure S4 – Low magnification images of post mortem hippocampi and quantification grouped via genotype. A) Low magnification images for Fig 6. Boxes represent images from Fig 6 and dotted lines depict the granule layer of the dentate gyrus. Scale bar represents 200 μ m. B) Analysis for TUJ1 neurite density and NESTIN staining in hippocampi grouped via genotype.