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Supplementary Materials for

A mouse model of 22q11.2 deletions: Molecular and behavioral signatures of Parkinson's disease and schizophrenia

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This PDF file includes:

Supplementary Figure 1. Sumitomo et al.

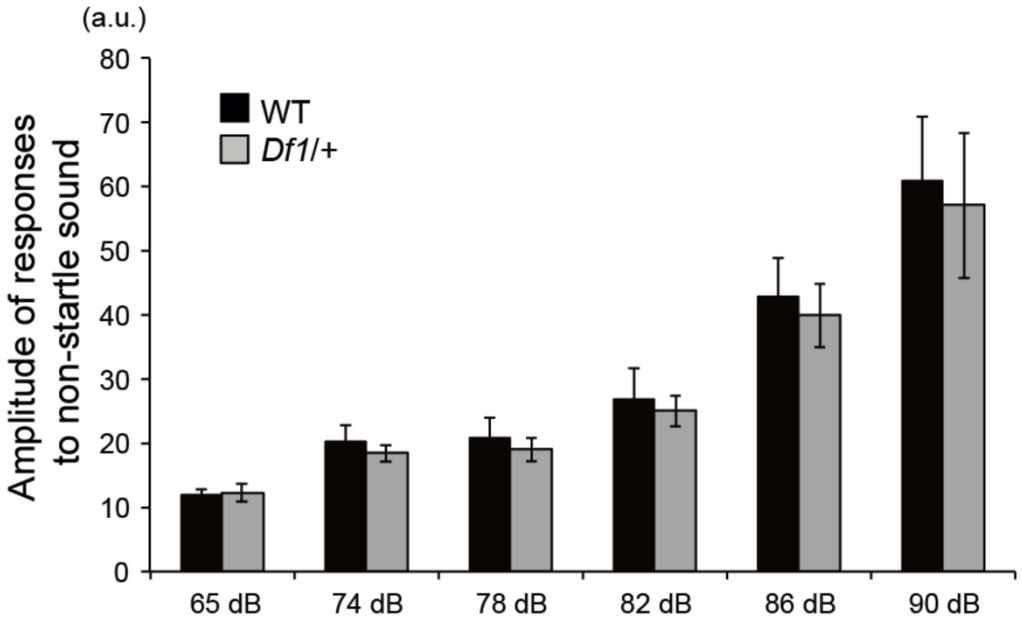

Fig. S1. Amplitude of responses to nonstartle sound stimuli in *Df1*/+ mice during PPI assays.

The average amplitude (arbitrary unit (a.u.) ± SEM) of responses to a series of non-startle sound stimuli (65, 74, 78, 82, 86, and 90 dB) randomly delivered to WT (n = 10) or *Df1*/+ mice (n = 10) during the PPI assays were plotted.

Supplementary Figure 2. Sumitomo et al.

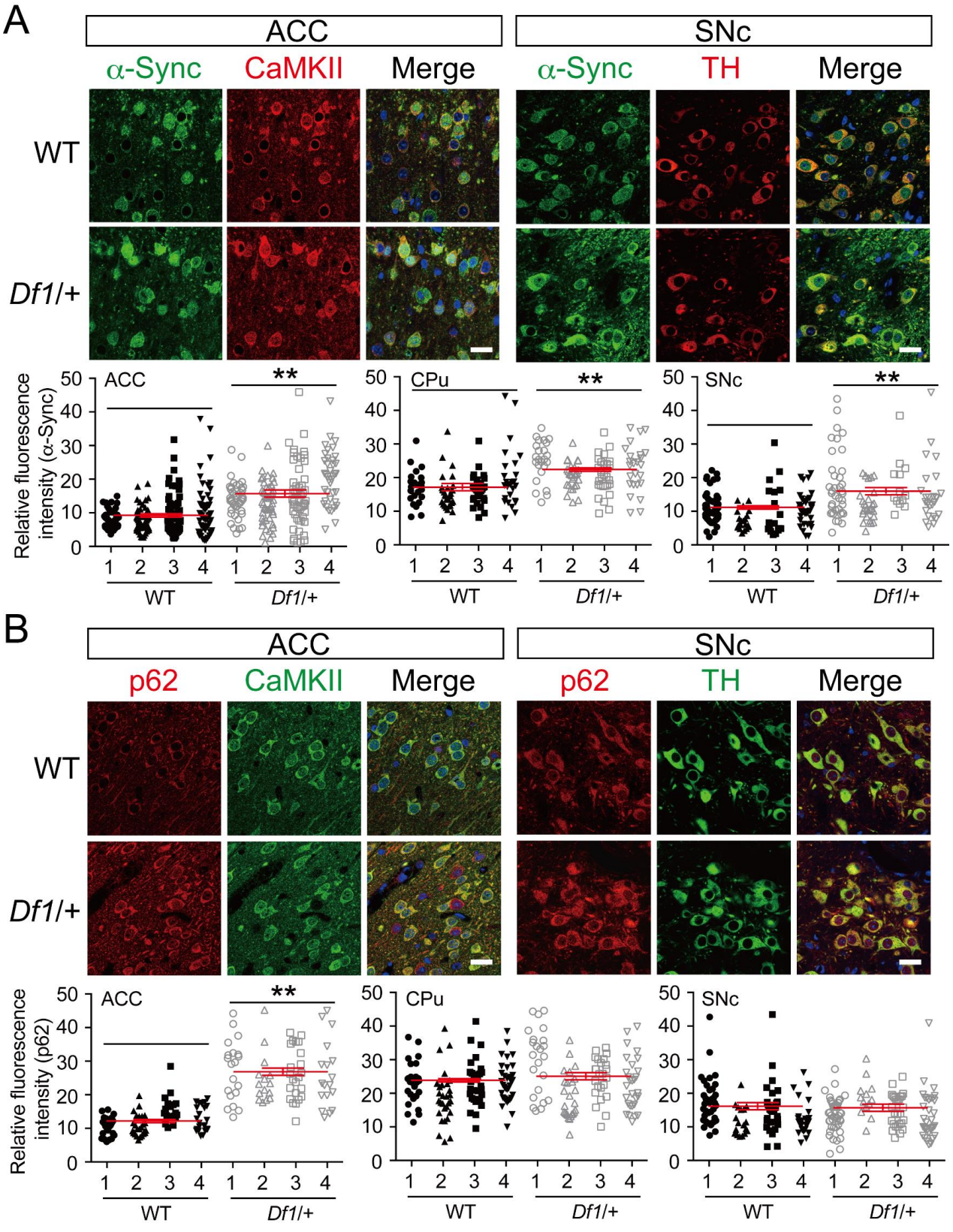

Fig. S2. Elevated expression of α-synuclein and p62 in *Df1*/+ mice at 8 months of age. (**A**, **B**) The ACC, CPu, and SNc in *Df1*/+ mice (n = 4) and the WT littermates (n = 4) (8 months old) were immunostained with anti-α-synuclein (α-Sync) (A) or anti-p62 (B) antibodies, together with anti-CaMKII, anti-DARPP-32, and anti-TH antibodies, which label the most abundant neuronal cell type in the ACC, CPu, and SNc, respectively. Images were acquired by a confocal microscope using the same parameters across multiple specimens. Images in the ACC and SNc are shown. Scale bar, 20 μm. Relative fluorescence intensities (arbitrary unit) of α-Sync or p62 immunostaining were measured from each soma co-labeled with the neuronal marker (30 to 50 somas per section) and plotted in the graph. Overall average fluorescence intensities (±SEM) calculated across 3 to 4 serial sections per animal from all animals used (n = 4 per group) are shown in red in the graph. $^{**}P < 0.01$ (Mann-Whitney test, two-tailed).

Supplementary Figure 3. Sumitomo et al.

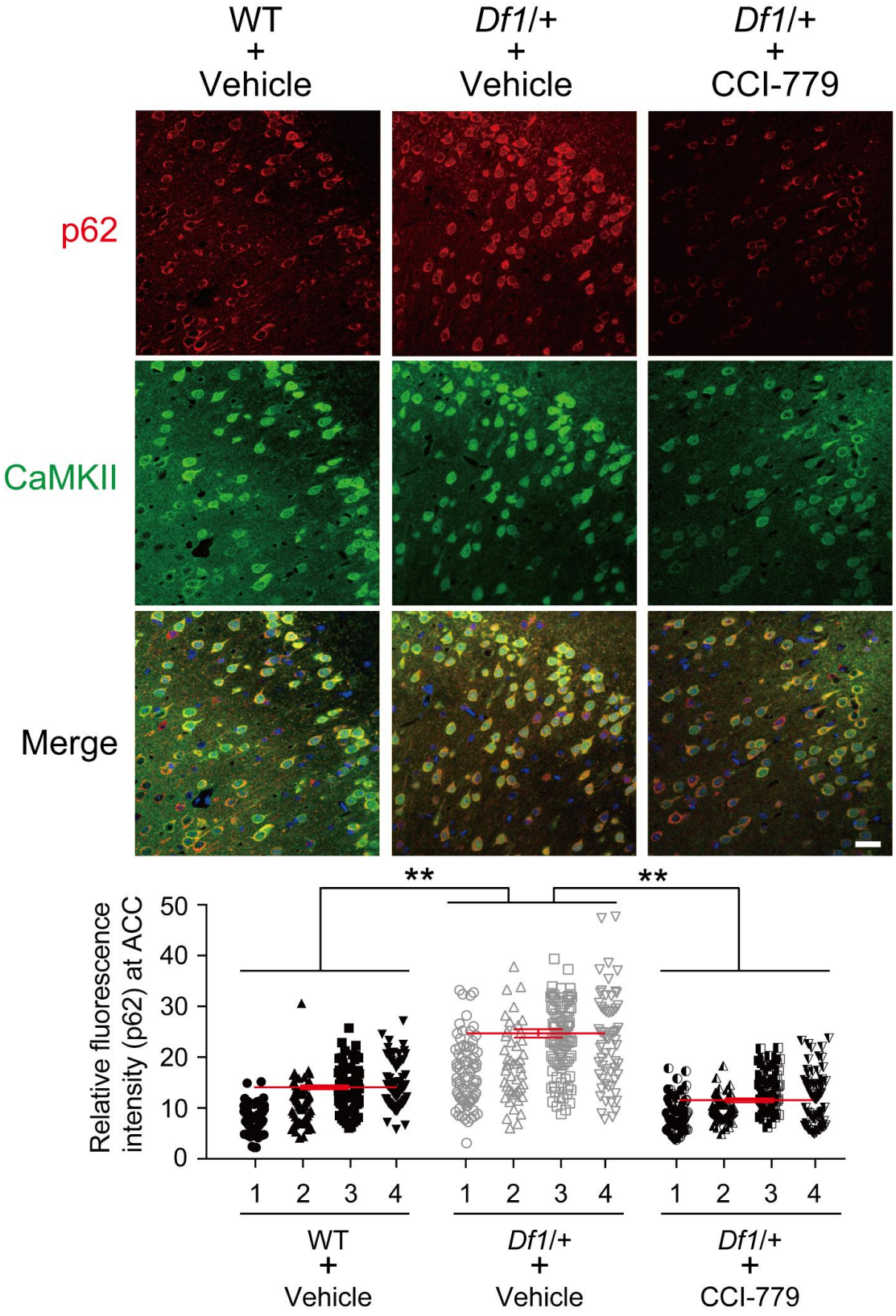

Fig. S3. Elevated p62 expression in *Df1*/+ mice is normalized by CCI-779 administration.

The mice used for behavior assays (*i.e.*, PPI and locomotion tests) were used for this immunohistochemistry analysis. The ACC in WT mice treated with saline for 11 days (n = 4), *Df1*/+ with saline (n = 4), and *Df1*/+ with CCI-779 (n = 4) (2 months old) were immunostained with anti-p62, together with anti-CaMKII antibody, which labels pyramidal neurons in the ACC. Images were acquired by a confocal microscope using the same parameters across multiple specimens. Scale bar, 20 μm. Relative fluorescence intensities (arbitrary unit) of p62 immunostaining were measured from each soma co-labeled with anti-CaMKII (~50 somas per section) and plotted in the graph. Overall average fluorescence intensities (±SEM) calculated across 3 to 4 serial sections per animal from all animals used (n = 4 per group) are shown in red in the graph. $^{**}P < 0.01$ (Kruskal-Wallis test followed by Dunn's multiple comparison tests).

Supplementary Figure 4. Sumitomo et al.

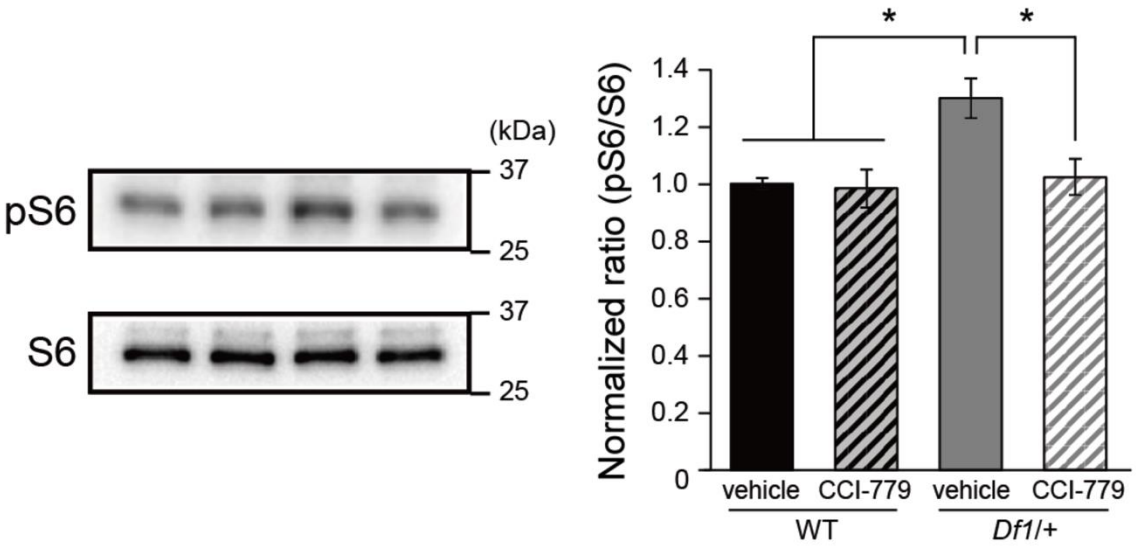

Fig. S4. Increased mTOR activity in *Df1*/+ mice is normalized by CCI-779 administration.

The protein extracts from the anterior cingulate cortex of WT or *Df1*/+ mice (2 to 3 months old, *n* = 6 per group) chronically treated with either CCI-779 (10 mg/kg body weight; i.p., once daily for 8 consecutive days) or vehicle (saline) were analyzed by Western blot using anti-S6 ribosomal protein and anti-phospho-S6 (Ser235/236) (pS6) antibodies, and the average ratios of densitometry values of pS6 to those of total S6 (pS6/S6) (±SEM) were plotted in the graph. *P < 0.05 (Kruskal-Wallis test followed by Dunn's multiple comparison tests).