

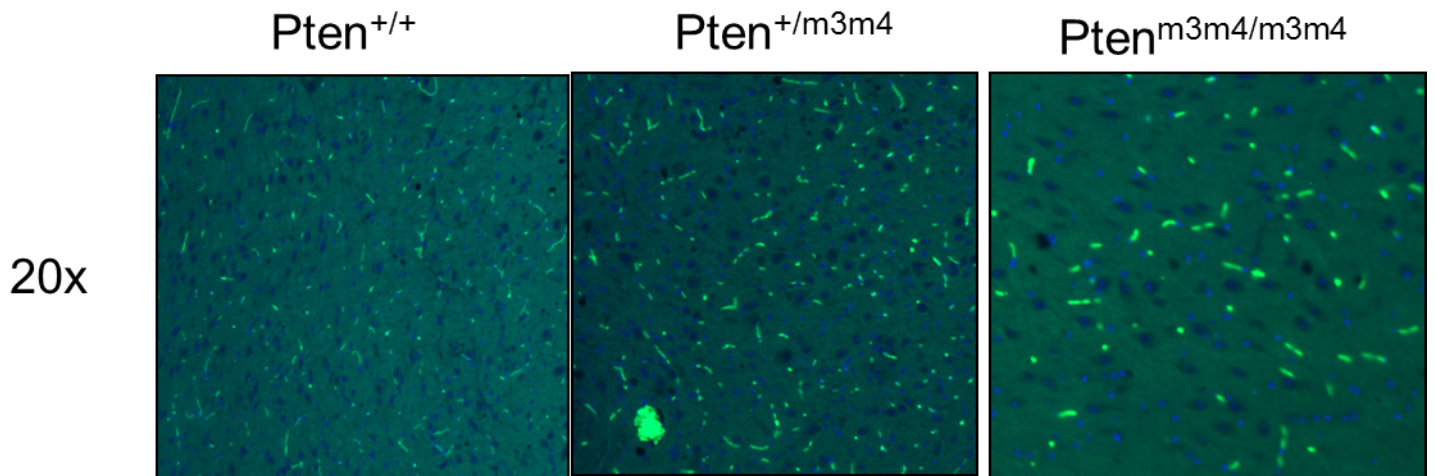
Supplementary Information

Cytoplasm-predominant Pten associates with increased region-specific brain tyrosine hydroxylase and dopamine D2 receptors in mouse model with autistic traits Pten

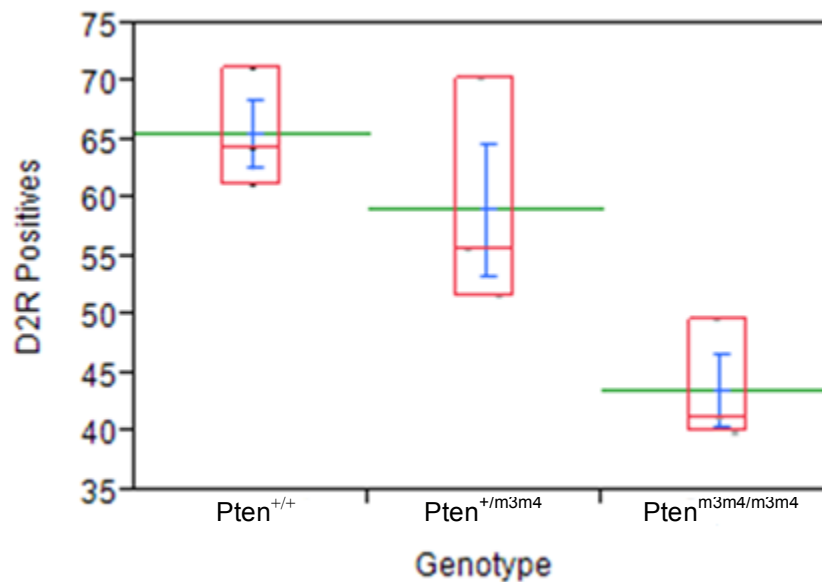
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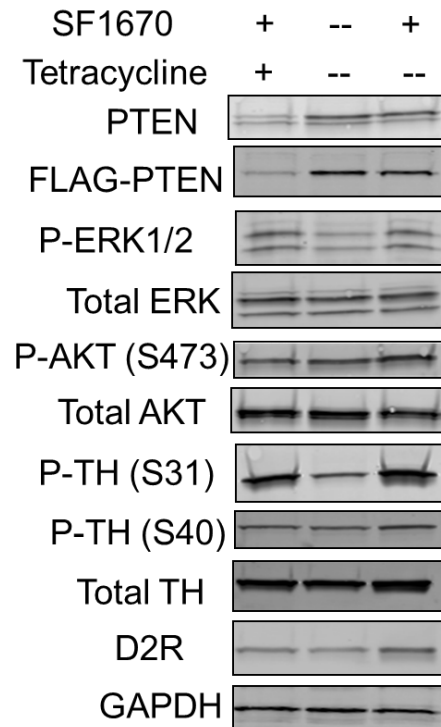
Supplementary Figures



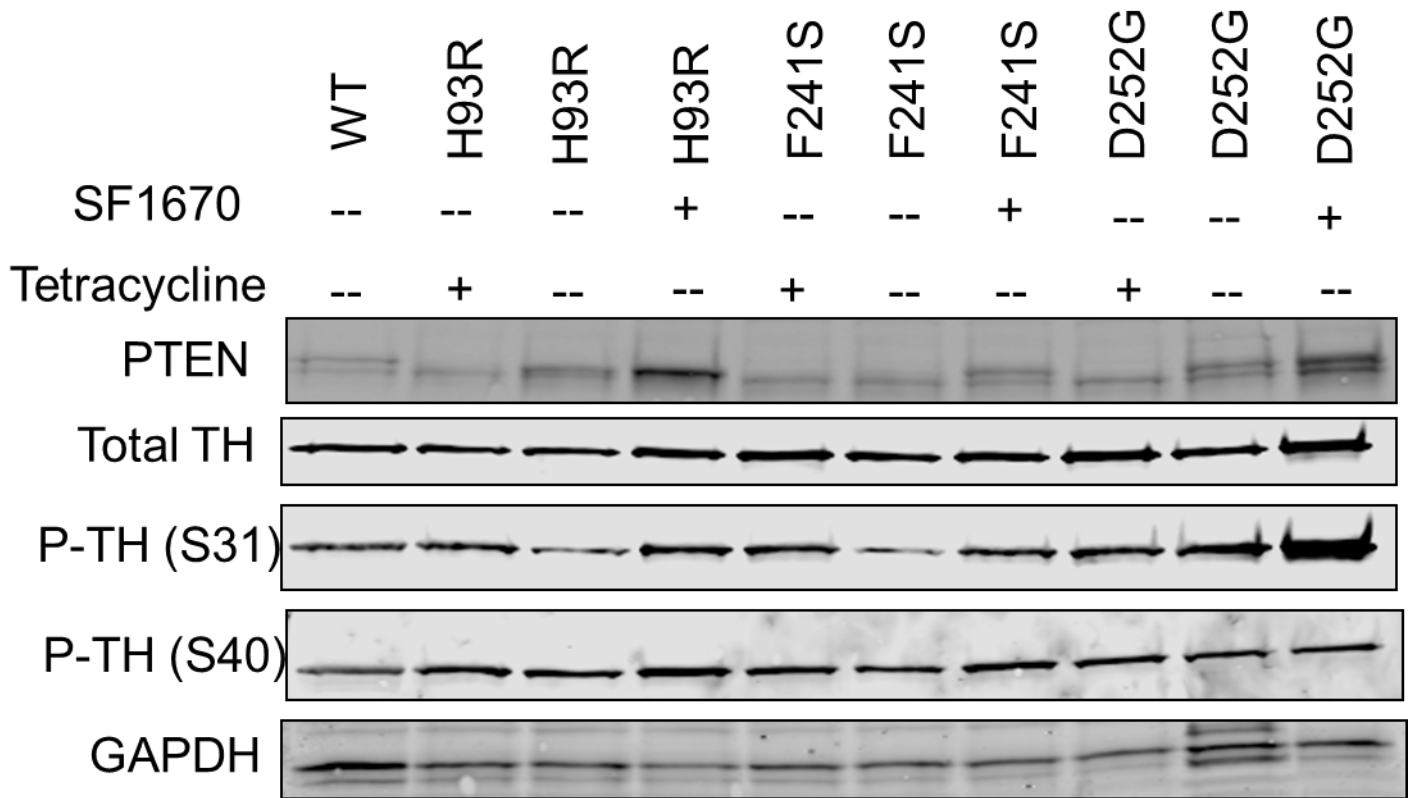
Supplementary Figure 1A. Immunofluorescent staining of frontal sections of mouse brains indicates increased D2R expression and larger nuclei in Pten^{m3m4/m3m4} mice.



Supplementary Figure 1B. Quantification of D2R immunofluorescence in triplicates of each genotype's frontal section of mouse brains indicates the mutant D2R immunofluorescence is significantly increased in comparison to the immunofluorescence in the wild-type ($P = 0.021$).



Supplementary Figure 2. Inhibition of ectopic and endogenous PTEN function with SF1670 leads to an increase in phosphorylation of TH in PC12 cells. PTEN inhibitor is applied in lanes 1 and 3 (+) but off (-) in lane 2. Tetracycline is on (+) in lane 1 turning off ectopic expression of wildtype PTEN in PC12 cells that has endogenous wildtype PTEN. Tet-off (-) turns on ectopic expression of wildtype human PTEN (lanes 2 and 3).



Supplementary Figure 3. Overexpression of naturally occurring ASD-associated germline *PTEN* mutations are unable to completely suppress TH phosphorylation. When tetracycline is applied (Tet+), ectopic *PTEN* expression is turned off. When tetracycline is removed (Tet-off; -), ectopic expression of *PTEN* occurs.