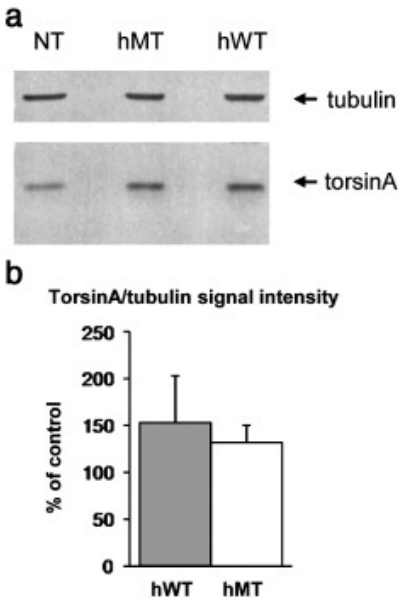

Fig. S1.
Comparable increases of torsinA in the striatum of hWT and hMT mice versus NT littermates. a) Western blot detection of torsinA and tubulin in each of the three strains. b) Densitometry of western blot analysis expressed as percentage of normalized torsinA/tubulin signal intensity in transgenic mice, compared to NT littermates. Error bars indicate SEM.

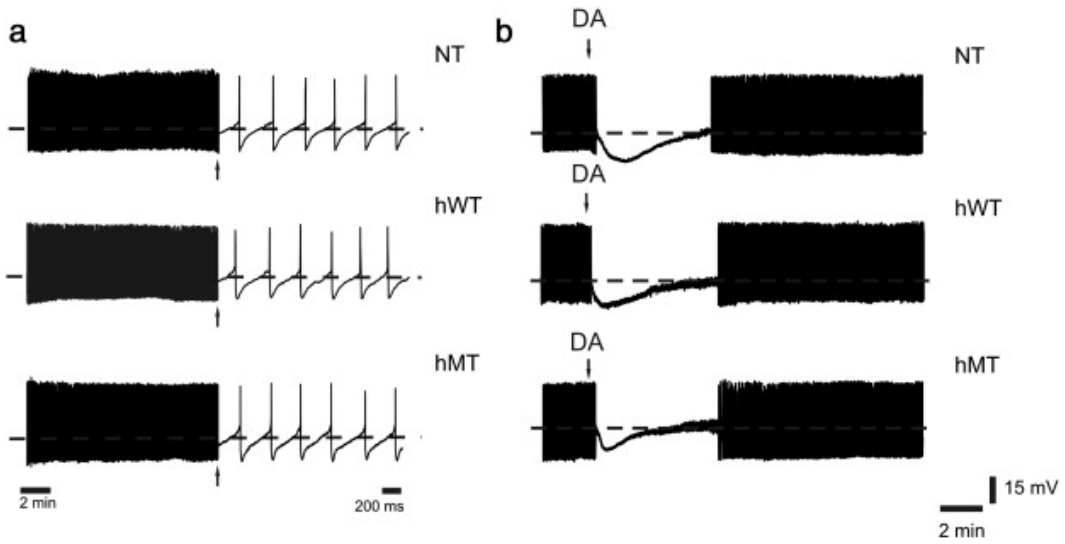

Fig. S2.
Physiological D2R-dependent firing in midbrain DA neurons of hMT mice. Sample traces showing the spontaneous, rhythmic firing activity recorded from dopaminergic nigral neurons (a) obtained from non-transgenic control animals (NT, upper trace), hWT (middle trace), and hMT mice (lower trace). Firing activity is shown at different chart speed, as indicated by the different calibration bars (200 ms and 2 min). Bath-application of DA (100 μM, 45 sec) induces a membrane hyperpolarization and blocks firing activity of the recorded neurons to a similar extent in the three genotypes (b). Upon DA washout, the membrane recovers and action potential discharge returns to control levels.

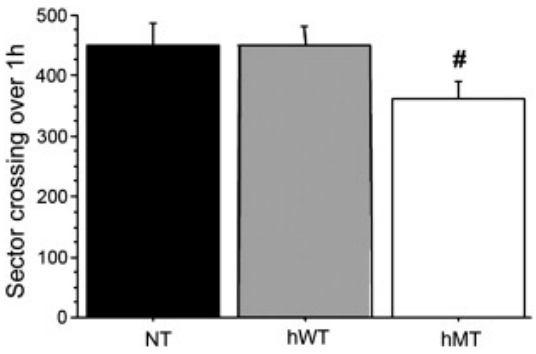

Fig. S3.
hMT mice display a mild hypoactive phenotype. Mild impairment of basal locomotor activity in hMT genotype. Naïve mice (NT n = 22; hWT n = 23; hMT n = 21) were submitted to a novelty-induced exploratory task. Locomotor activity is expressed as manually counted number of sector crossing (mean ± SEM), over a 1 h test. Genotypes are as indicated. # $p < 0.05$, compared with NT mice.

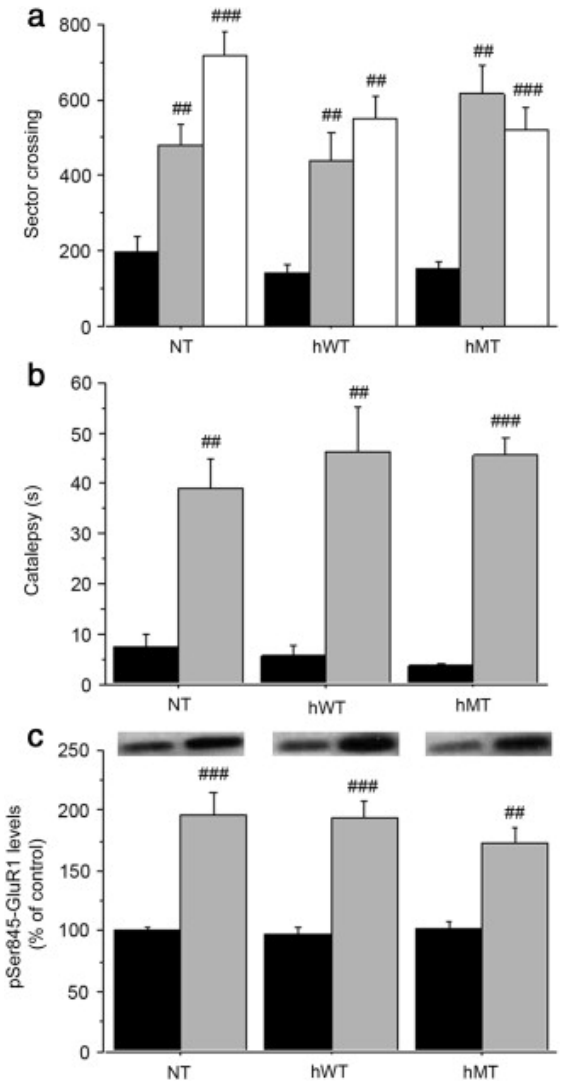

Fig. S4.

hMT mice display normal D1R-mediated function. (a) The D1R agonist SKF81297 increased motor activity in all tested groups. Mice were injected i.p. with SKF81297 2.5 mg/kg (grey bar; NT n = 7, hWT n = 7, hMT n = 6), SKF81297 5 mg/kg (white bar; n = 8, each genotype) or vehicle (black bar; n = 13, each genotype). Locomotion is expressed as manually counted number of sector crossing over 60′ , after 60′ of habituation. (b) The D1R antagonist SCH23390 induced a similar cataleptic response in all genotypes. Catalepsy time (s) was measured 60′ after i.p. injection of SCH23390 0.25 mg/kg (n = 8, each genotype) or vehicle (NT, n = 11, hWT, n = 8, hMT n = 8). (c) SKF81297 increased GluR1 phosphorylation at Ser845 in the striatum of all genotypes. Mice were injected i.p. with SKF81297 5 mg /kg (NT, n = 7; hWT n = 7; hMT n = 7) or vehicle (NT, n = 11; hWT, n = 7; hMT, n = 6) and killed 20′ later to perform western blotting analysis of pSer845-GluR1. Upper panels show representative autoradiograms. Lower panel indicates summary of density values, normalized to DARPP32. All data are expressed as mean ± SEM. ## $p < 0.01$, ### $p < 0.0001$, compared with vehicle group, within genotype.