Supplementary Table 1. Summary of demographic data, neuropathology and experimental results of human subjects

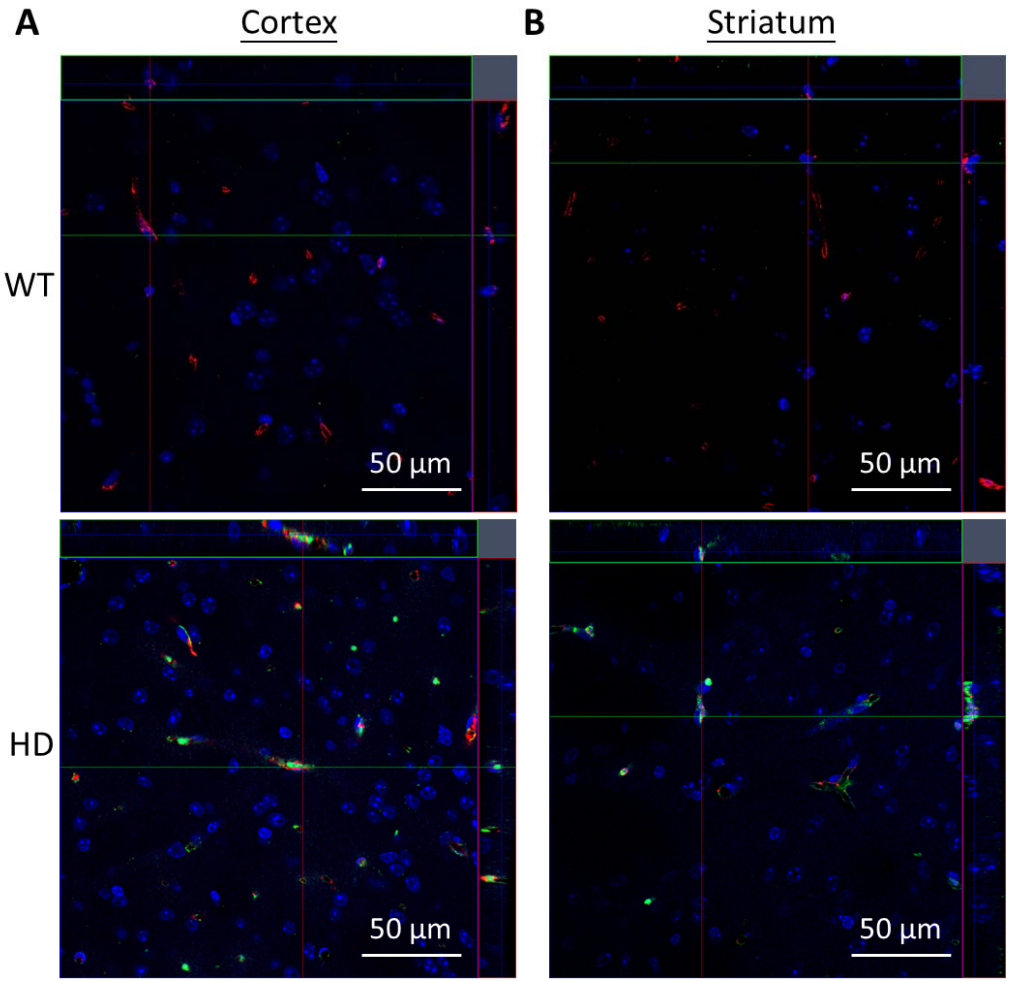
Subject	Race (Gender)	Brain area	Age (years)	HD Vonsattel grade	Other pathology	Cause of death	PMI
Non-HD-1	Caucasian (F)	Frontal cortex	79	n.a.	Depression	Drug overdose	14 h
Non-HD-2	Caucasian (F)	Frontal cortex	77	n.a.	Lung disease/HBP/ Arthritis/Breast cancer	ASCVD	8 h
HD-1	Caucasian (F)	Frontal cortex	82	n.d.	Senile cerebral disease	Complications	6 h
HD-2	Caucasian (F)	Frontal cortex	78	III	Senile cerebral disease	Complications	2 h
Non-HD-3	Caucasian (M)	Caudate nucleus	58	n.a.	n.d.	n.d.	9 h
Non-HD-4	Caucasian (F)	Caudate nucleus	53	n.a.	HBP/Asthma	HASCVD	15 h
HD-3	Caucasian (M)	Caudate nucleus	43	n.d.	n.d.	Complications	10 h
HD-4	Caucasian (M)	Substantia nigra	58	n.d.	n.d.	ASCVD	17 h

F, female; M, male; n.a., not applicable; n.d., not determined; PMI, post-mortem interval; HBP, high blood pressure; ASCVD, arteriosclerotic cardiovascular disease; HASCVD, hypertensive arteriosclerotic cardiovascular disease.

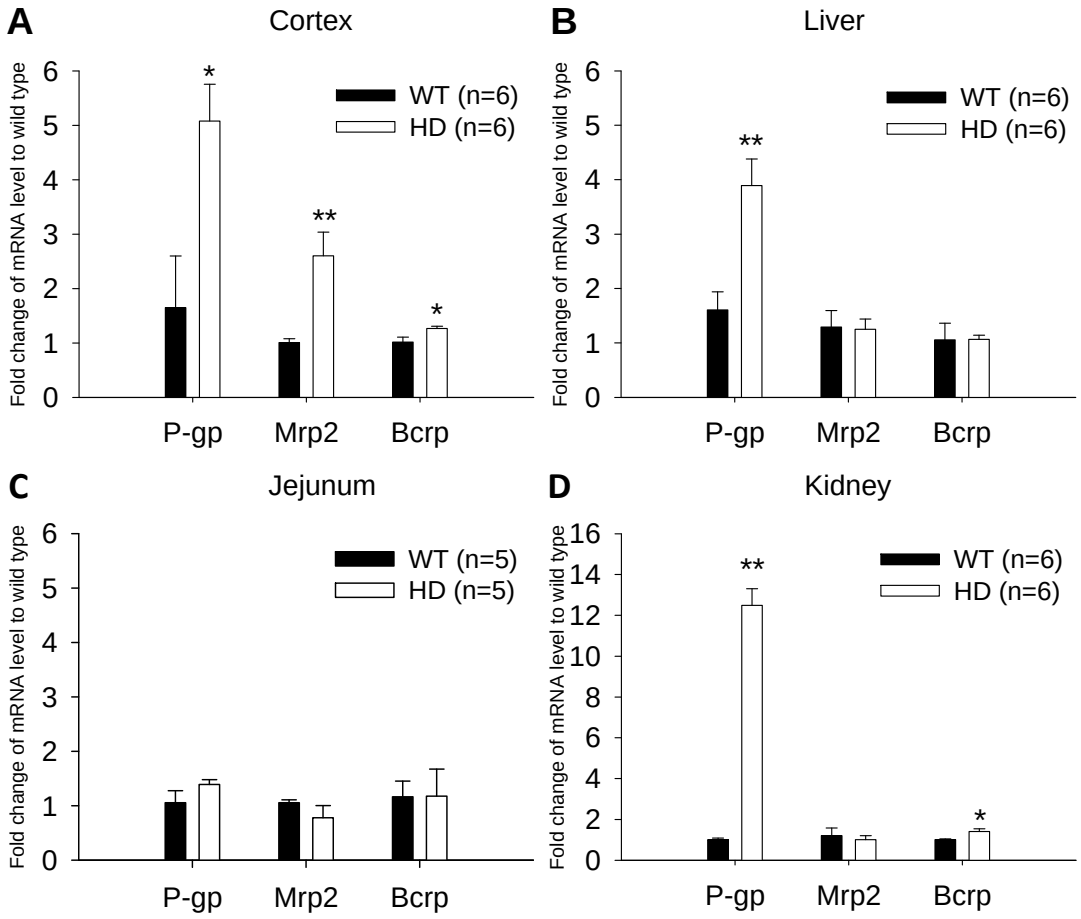
Supplementary Table 2. Relative mRNA levels of human and mouse HTT in brain cortex and the isolated brain capillaries (BCs) of R6/2 HD mice, the wild-type (WT) controls, and C57BL/6 (B6) mice.

	R6/2	WT	B6
Mouse HTT			
BCs (n=2-3)	4.81±0.53	2.21±0.36	2.81±0.87
Cortex (n=6-11)	6.40±0.69	6.56±0.50	6.42±0.88
Human HTT			
BCs (n=2-3)	8.66±1.16	ND	ND
Cortex (n=6)	4.32±0.60	ND	ND

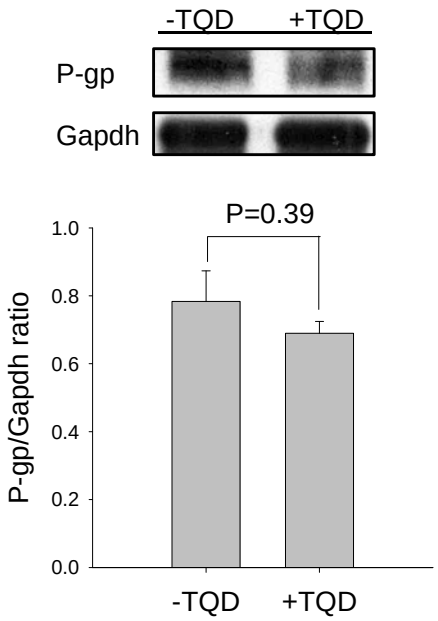
Methods for Supplementary Table 2. Brain capillaries were isolated from male and female R6/2 and wild-type (WT) mice of 12 weeks old or B6 mice of 6 weeks old (5-6 animals in each preparation) by the methods described in the article. The cDNA (1 μL) was mixed with 7 μL of DEPC-treated sterile deionized distilled water, 10 μL of Power SYBR Green PCR Master Mix (Applied Biosystems, Warrington, UK) and 0.5 μM forward and 0.5 μM reverse primers: mouse HTT forward 5'-CTCAGAAGTGCAGGCCTTACCT-3' or reverse 5'-GATTCCTCCGGTCTTTTGCTT-3'; human HTT forward 5′-GCCGCTCAGGTTCTGCTTT-3' or reverse 5′-AAGGCCTTCATCAGCTTTTCC-3'. Quantitative RT-PCR was conducted as described in the text. Relative expression was calculated by $2^{-\Delta Ct}\times 10^4$. ΔCt is the relative quantity of Htt mRNA normalized to Gapdh mRNA. Data are given as mean±SEM of several independent preparations as indicated in the table. For BCs, each preparation was from 5-6 animals. ND, not detectable.



Supplementary Figure 1. Orthogonal views of the same imaging fields of the cortex (A) and striatum (B) shown in Figure 1. Images were taken from the z-section plane indicated by the blue line. The nuclear distribution of the p65 subunit of NF-κB is identified using immunostaining of p65 (green), CD31 (red) positive brain capillary endothelial cells, and nuclei (blue). The images were acquired at 40× magnification on an LSM 880 confocal microscope (Zeiss, Jena, Germany). Scale bars indicate 50 µm.



Supplementary Figure 2. mRNA levels of P-gp, Mrp2, and Bcrp in the cerebral cortex (A), liver (B), jejunum (C), and kidney (D) of male R6/2 HD mice at 12 weeks of age (white bars), compared to age-matched wild-type (WT) controls (black bars). Relative expression was calculated by $2^{-\Delta\Delta Ct}$. $\Delta\Delta$Ct value was obtained by subtracting the mean ΔCt value of WT controls from the individual ΔCt value, the relative quantity of P-gp, Mrp2, or Bcrp mRNA normalized to Gapdh mRNA. The data are given as the mean±SEM of five to six animals. A fold change greater than 1 indicates up-regulation and a fold change less than 1 indicates down-regulation. (*, $P < 0.05$; **, $P < 0.01$ compared to WT mice).



Supplementary Figure 3. Western blotting and the quantification results of P-gp in the membrane fractions isolated from the whole brains of the WT (B6CBAFI/J) mice 2 hours after an intravenous injection of vehicle (2.5% aqueous dextrose solution; -TQD group) or 6 mg/kg tariquidar (TQD) (+TQD group). Tariquidar was freshly prepared in 2.5% aqueous dextrose solution. The quantitative results are presented as the mean±SEM of three mice.