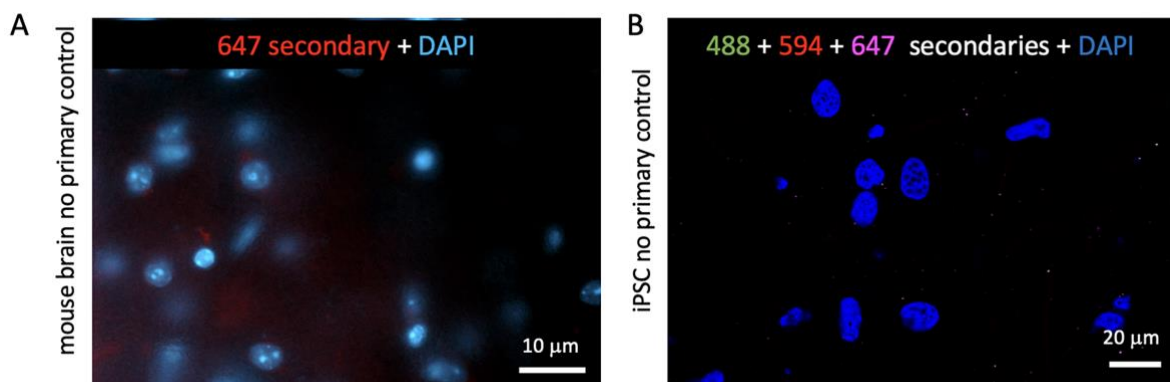


Supplementary table 1: Human brain samples used for western blot analysis

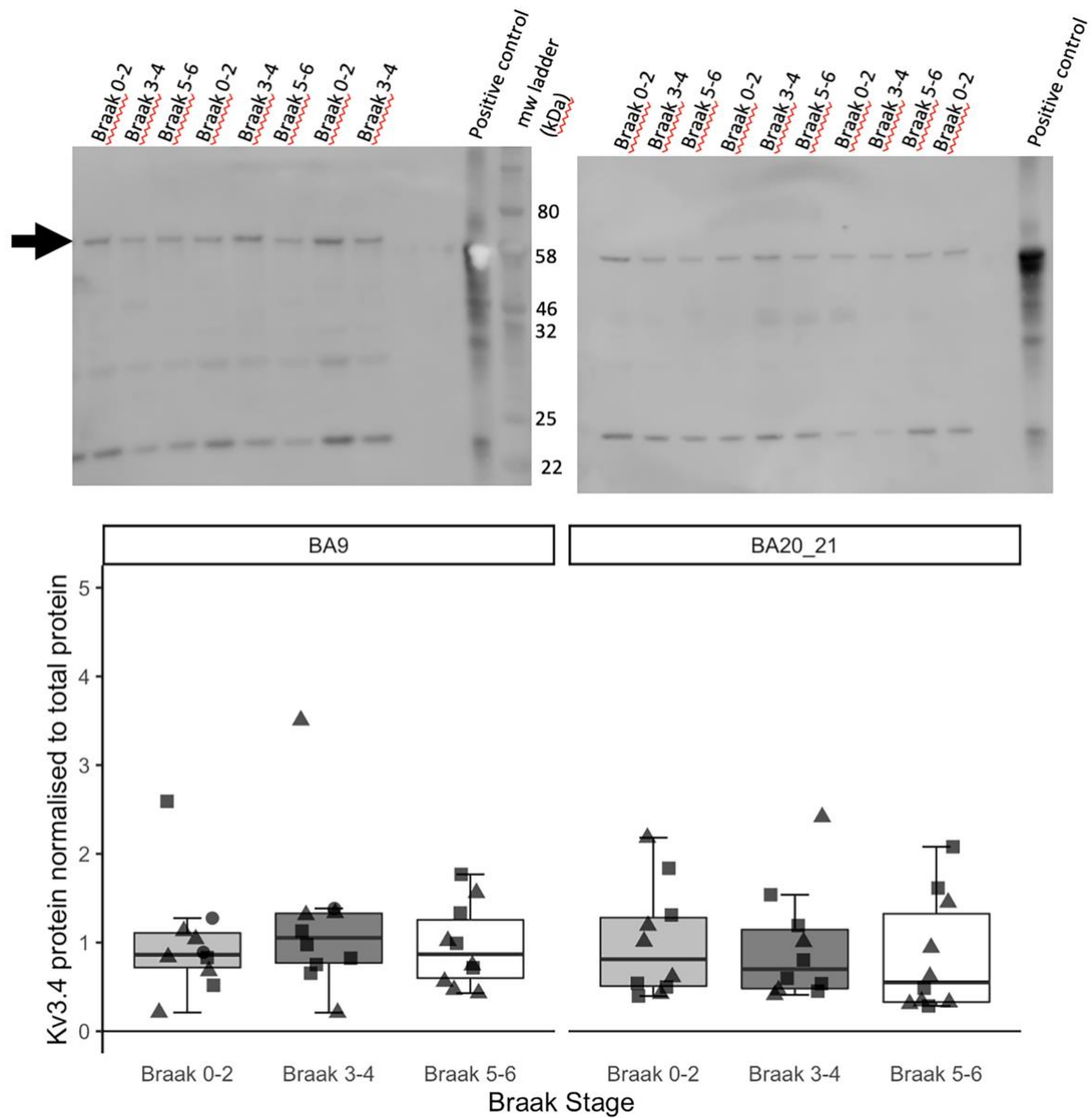
	BBN	Sex	Age	PMI (hours)	Braak Stage
Braak 0 - 1	001.35138	F	73	74	0
	001.34150	M	63	115	0
	001.35420	F	82	114	I
	001.35215	M	82	40	I
	001.31504	F	65	76	I
	001.31503	F	57	73	I
	001.28402	M	79	49	I
	001.28794	F	79	61	I
	001.30208	M	73	66	I
	001.30178	M	72	60	0
Braak 3 - 4	001.32820	F	69	94	IV
	001.29528	F	93	31	III
	001.28411	F	88	65	III
	001.28405	M	84	83	IV
	001.26499	F	81	59	III
	001.26491	M	77	27	III
	BBN_26492	F	74	71	IV
	BBN_24323	M	67	103	IV
	BBN_20994	M	75	59	III
	BBN_19600	F	85	36	III
Braak 5 - 6	001.35183	M	74	75	VI
	001.35096	M	72	103	VI
	001.33698	F	90	76	VI
	001.33636	M	93	43	VI
	001.32929	F	85	80	VI
	001.30883	F	61	69	VI
	001.29911	M	66	52	VI
	001.29521	M	95	96	VI
	001.26500	M	81	83	VI
	BBN_24668	F	96	61	VI

Supplementary Table 2: Sequences of qPCR primer pairs

PRIMER	DIRECTION	SEQUENCE
KV3.4a	Forward	TCCACCACTCGAGACAGAAACAAG
	Reverse	ATGTGGCAGGAACAGAGTCC
GAPDH	Forward	CCAAGGTCATCCATGACAAC
	Reverse	ACAGTCTTCTGGGTGGCAGT
RPLP1	Forward	AGCCGGTGTAATGTTGAGC
	Reverse	CAGATGAGGCTCCCAATGTT



Supplemental Figure 1: No primary antibody negative controls for immunohistochemistry of mouse brain (A) and immunocytochemistry of iPSC derived neurons (B).



Supplemental Figure 2: Western blot of human brain samples from frontal (BA9) and temporal (BA20/21) cortex of people with low (Braak 0-2), moderate (Braak 3-4) and extensive (Braak 5-6) Alzheimer’s disease pathology reveals no difference between brain regions or Braak stages (n=10 per group, linear model on Tukey transformed data $p > 0.05$ for all fixed effects). The arrow indicates full-length Kv3.4 protein immunoreactivity.