

Table S1 Antibodies Used

PRIMARY						
Antigen	Antibody Name*	Host Species	Source	Catalog #	Assay	Dilution
A β ₁₋₅	3D6	Mouse	Janssen or from ATCC hybridoma cell line	PTA-5130	WB IHC ELISA	1:1,000 1:3,000 2 μ g/ml
A β ₁₋₁₂	26D6	Mouse	Bristol-Myers Squibb		WB ELISA	1:1,000 2 μ g/ml
A β ₁₋₁₆	82E1	Mouse	IBL	10326	WB	1:1,000
A β ₃₋₈	6E10	Mouse	BioLegend	803001	WB	1:1,000
A β ₁₃₋₂₈	266	Mouse	Janssen		ELISA	10 μ g/ml
A β ₃₃₋₄₂	21F12	Mouse	Janssen		ELISA	5 μ g/ml
Actin α 1	Actin	Rabbit	Sigma-Aldrich	A2066	WB	1:3,000
APP A4 (N-Term)	22C11	Mouse	EMD Millipore	MAB348	WB	1:1,000
Human APP	8E5	Mouse	Janssen		WB	1:10,000
APP (CTFs)	CT15	Rabbit	Edward Koo, UCSD		WB	1:2,000
	85461	Mouse	Bristol-Myers Squibb		WB	1:1,000
Calbindin		Rabbit	Swant	CB38	IHC	1:30,000
c-Fos [2H2]		Mouse IgG1	Abcam	ab208942	IHC	1:2,000
EAAT2		Rabbit	Abcam	ab41621	WB	1:3,000
GAPDH		Mouse	Millipore	MAB374	WB	1:10,000
Iba1		Rabbit	Wako	019-19741	IHC	1:1000
Nav1.1		Rabbit	Alomone Labs	ASC-001	WB	1:1,000
Nav1.2		Rabbit	Alomone Labs	ASC-002	WB	1:1,000
Nav1.6		Rabbit	Alomone Labs	ASC-009	WB	1:1,000
Neuropeptide Y		Rabbit	ImmunoStar	22940	IHC	1:2,000
NR1		Mouse	EMD Millipore	05-432	WB	1:1,000
Pan Voltage-gated Sodium Channel, α subunit	PanNa _v	Rabbit	Sigma-Aldrich	S6936	WB	1:1,000
Parvalbumin		Rabbit	Swant	PV27	WB	1:5,000

Spondin-1	SPON1	Rabbit	Abcam	ab40797	WB	1:1,000
βIII-Tubulin		Rabbit	Abcam	ab18207	WB	1:3,000
Zbtb20		Rat	BD Biosciences	565453	WB	1:1,000
SECONDARY						
Antibody Name	Conjugated Tag	Host Species	Source	Catalog #	Assay	Dilution
Anti-Mouse	Alexa Fluor 546	Donkey	Life Technologies	A10036	IHC	1:500
	Biotin-SP	Goat	Jackson ImmunoResearch	115-067-003	IHC	1:500
	IRDye 680LT	Goat	LI-COR	925-68020	WB	1:10,000
	IRDye 800CW	Donkey	LI-COR	925-32212	WB	1:10,000
Anti-Rabbit	Biotin-SP	Donkey	Jackson ImmunoResearch	711-065-152	IHC	1:1,000
	HRP	Goat	Calbiochem	401515	WB	1:5,000
	IRDye 680LT	Goat	LI-COR	925-68021	WB	1:10,000
	IRDye 800CW	Donkey	LI-COR	926-32213	WB	1:10,000
Anti-Rat	HRP	Goat	Millipore	AP136P	WB	1:1,000

*left blank if synonymous with the antigen that the antibody recognizes

Figure S1

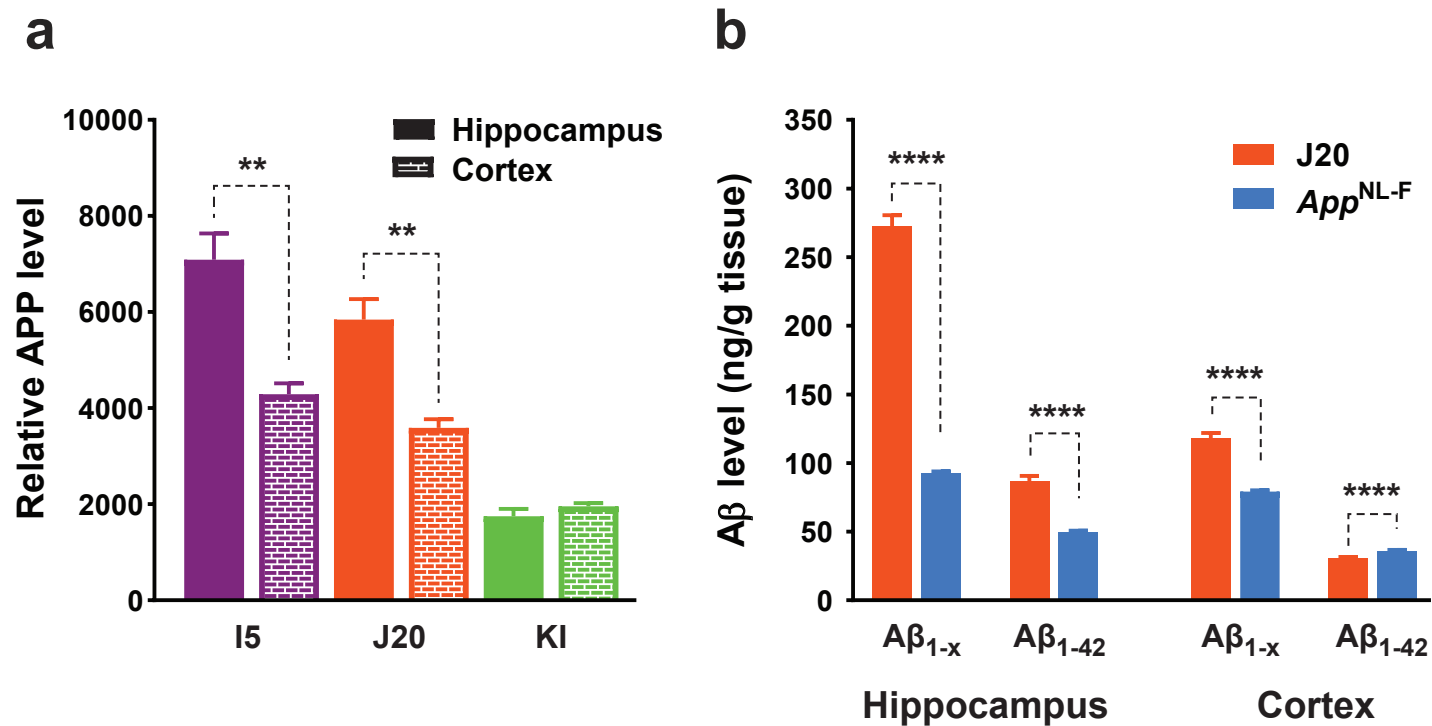


Figure S2

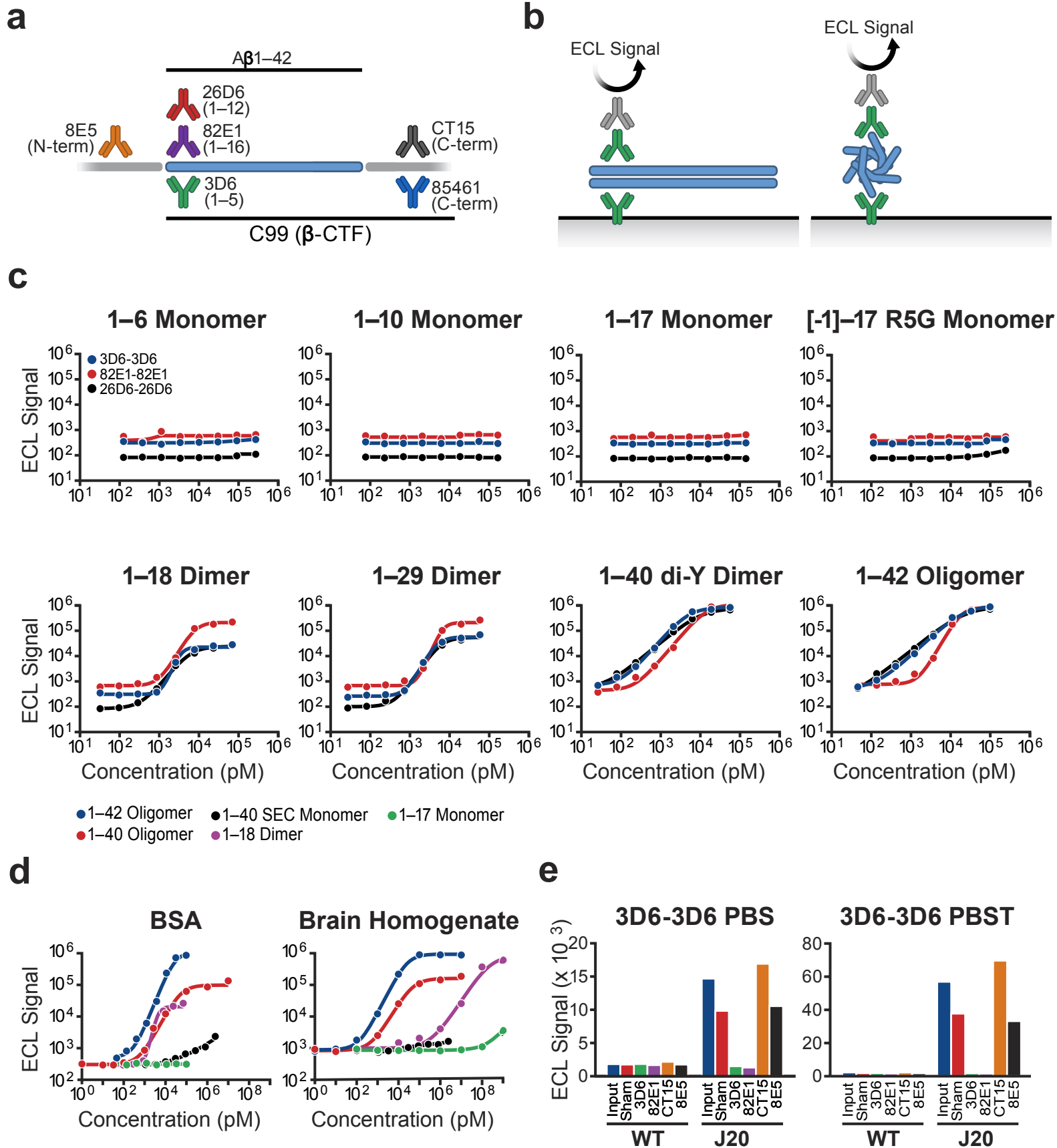


Figure S3

a

DAEFRH	1-6 monomer
DAEFRHDSGY	1-10 monomer
DAEFRHDSGYEVHHQKL	1-17 monomer
MDAEF GHDSGYEVHHQKL	[-1]-17 R5G monomer
DAEFRHDSGYEVHHQKCG	1-18 dimer
DAEFRHDSGYEVHHQKCG	
DAEFRHDSGYEVHHQKLV(Nme) FF(Nme) AEDVGCNWG	1-29 dimer (chemically-modified)
DAEFRHDSGYEVHHQKLV(Nme) FF(Nme) AEDVGCNWG	
DAEFRHDSGYEVHHQKLVFFAEDV GSNKGAIIGLMVGGVV	1-40
DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	1-40 di-Y dimer
DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	
DAEFRHDSGYEVHHQKLVFFAEDV GSNKGAIIGLMVGGVVIA	
DAEFRHDSGYEVHHQKLVFFAEDV GSNKGAIIGLMVGGVVIA	1-42

b

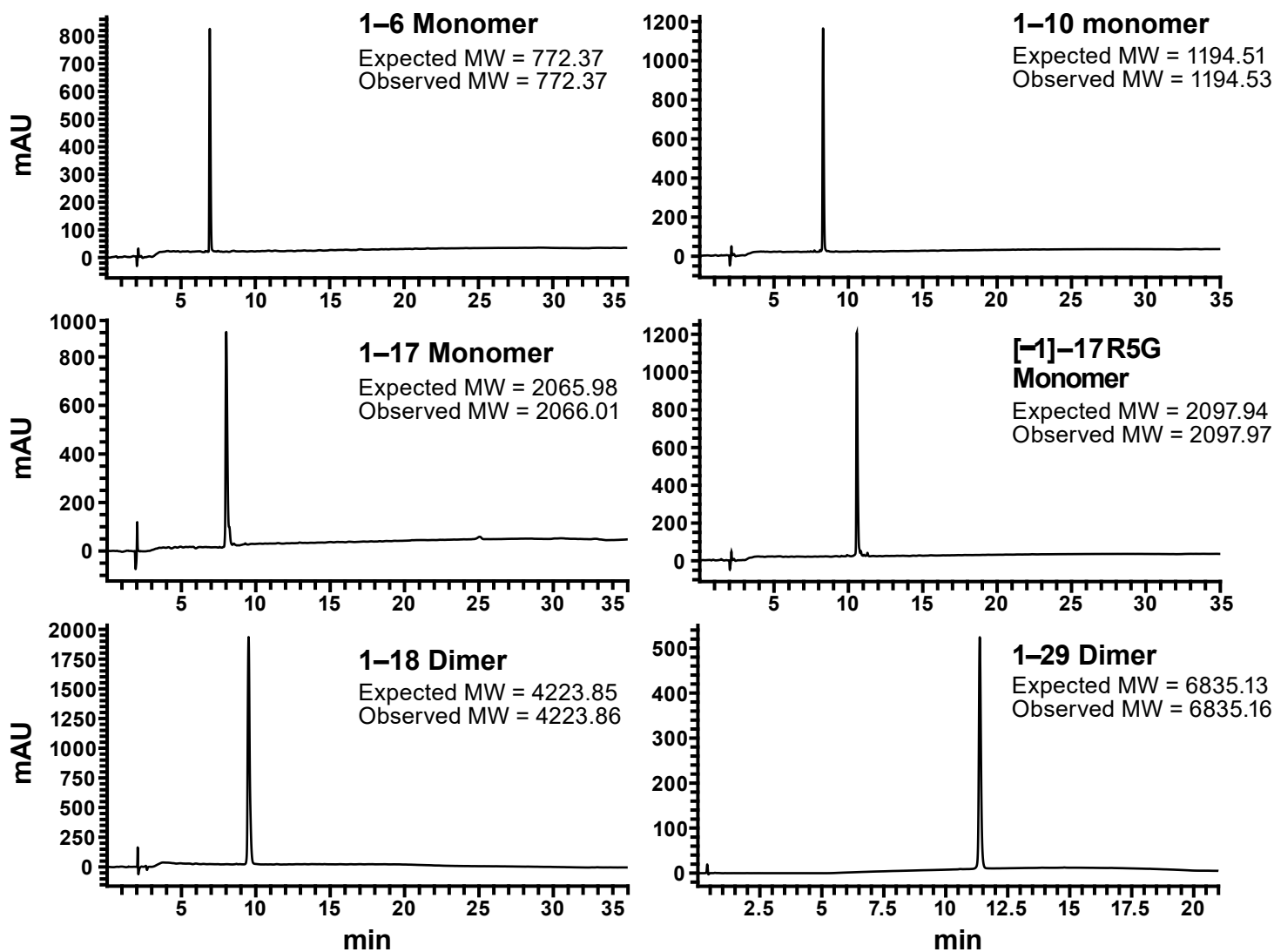


Figure S4

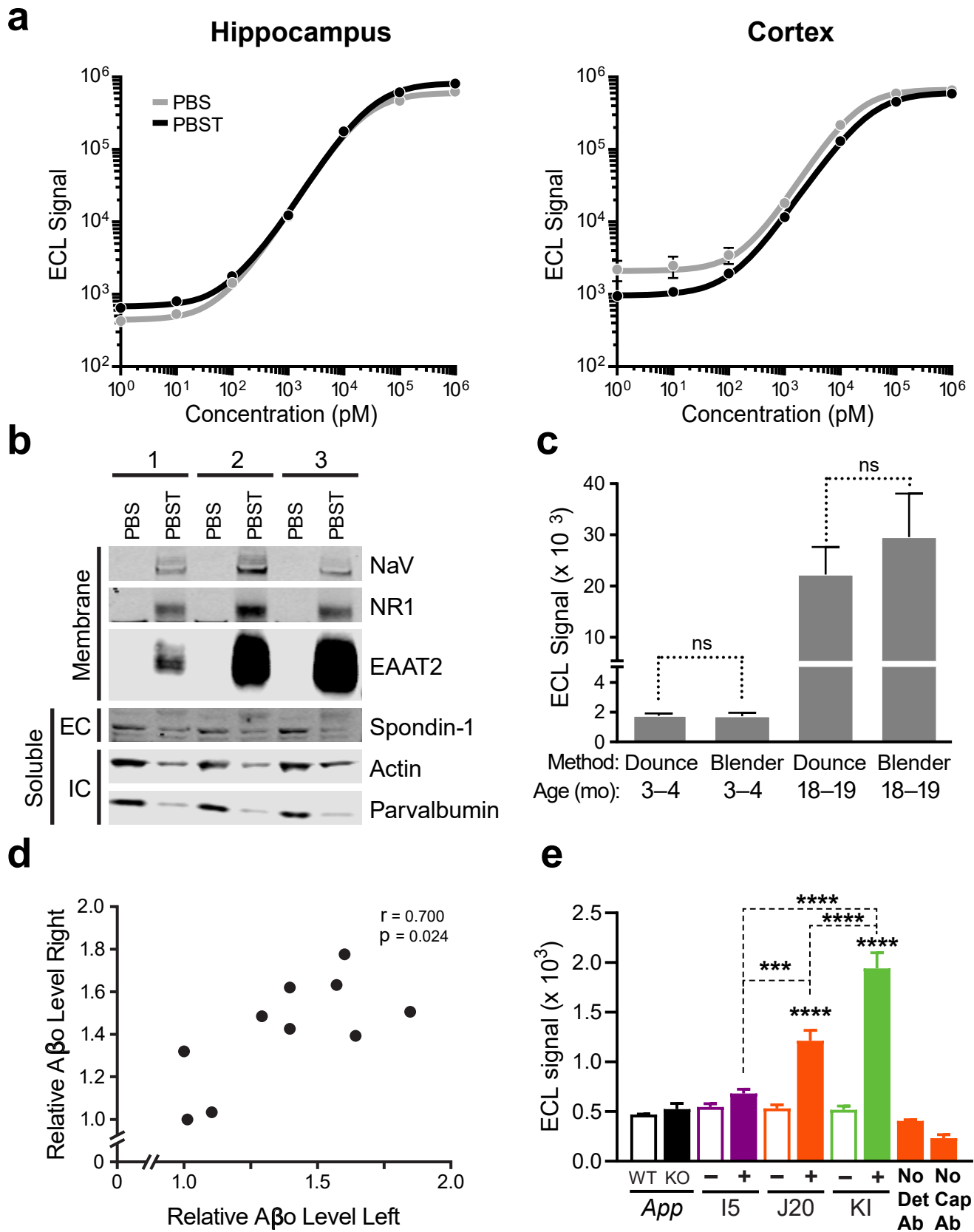


Figure S5

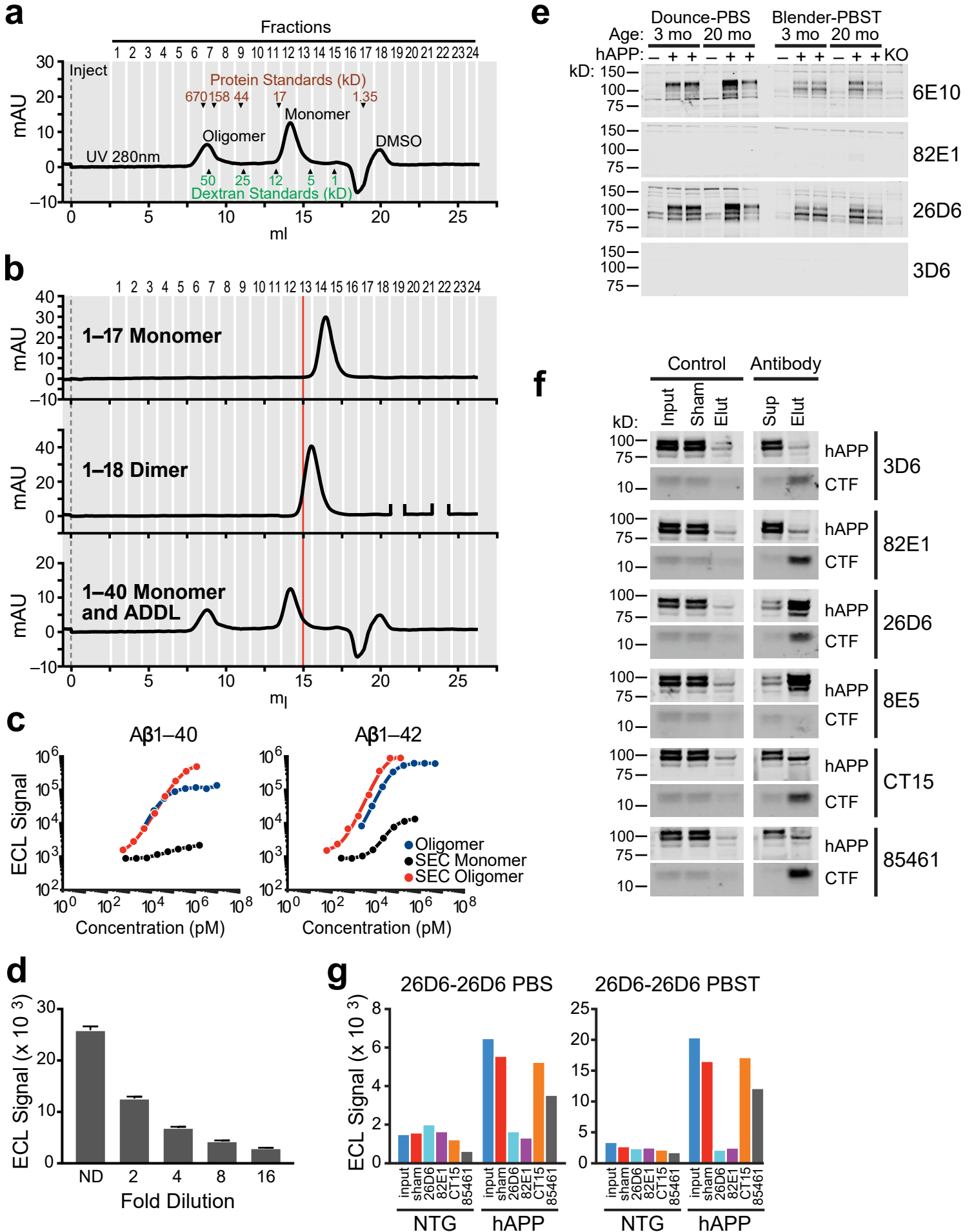
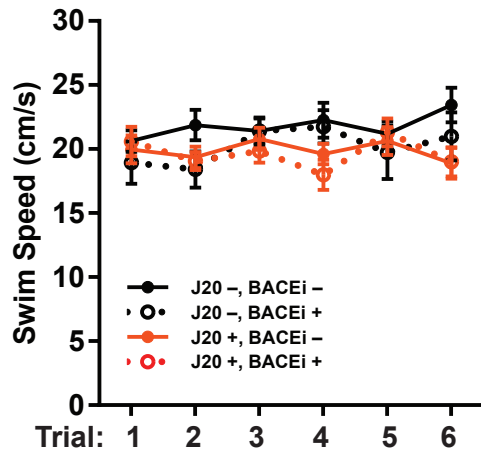


Figure S6

a



b

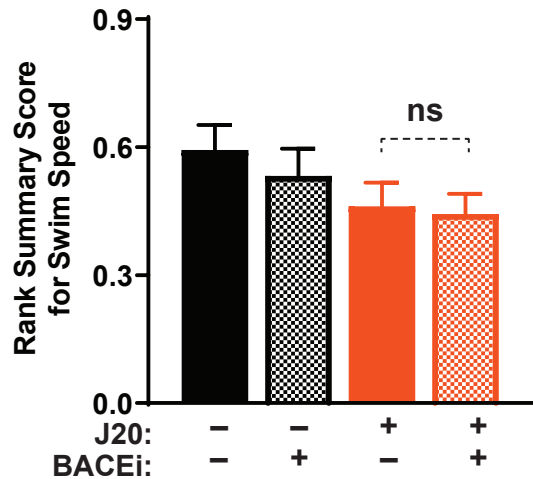


Figure S7

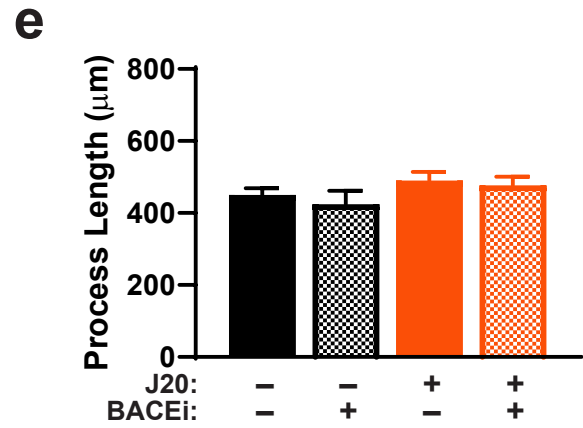
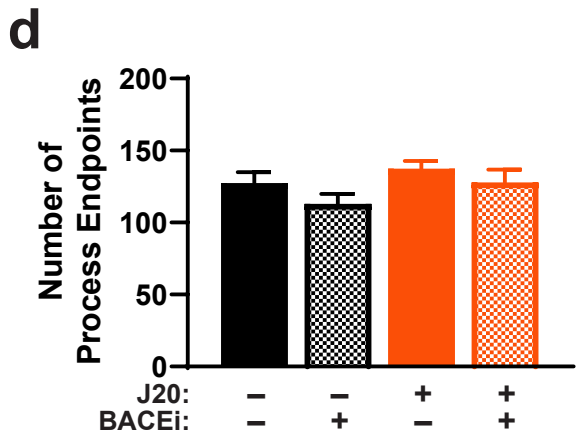
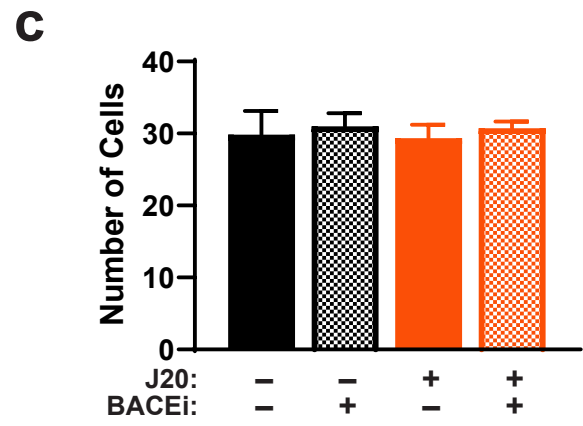
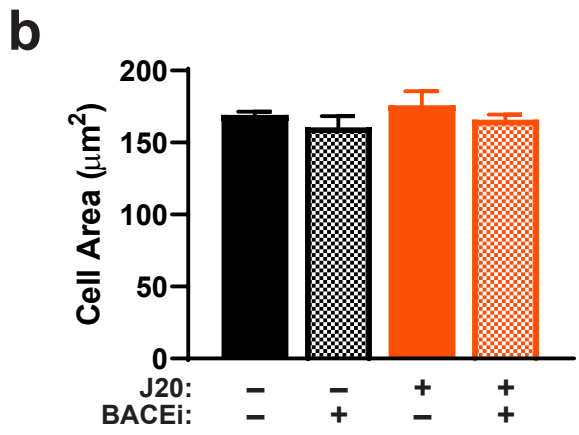
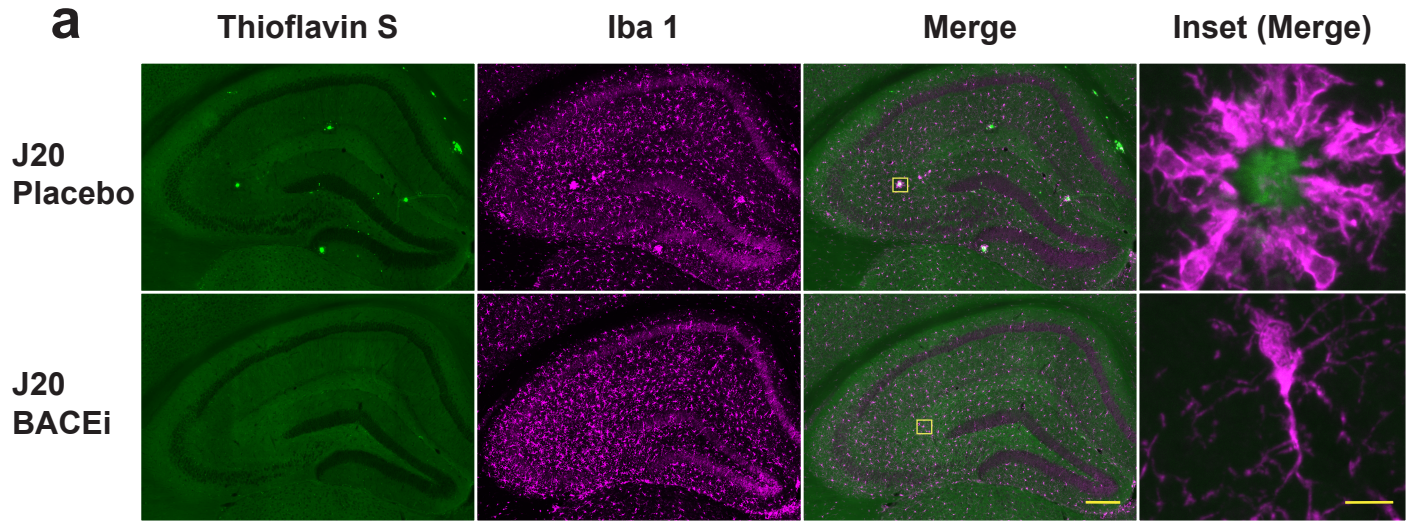
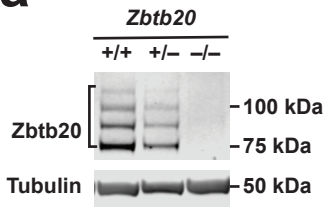
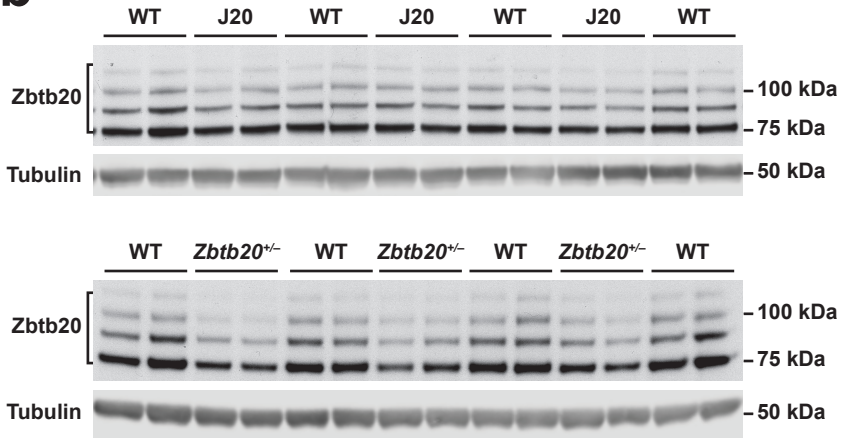


Figure S8

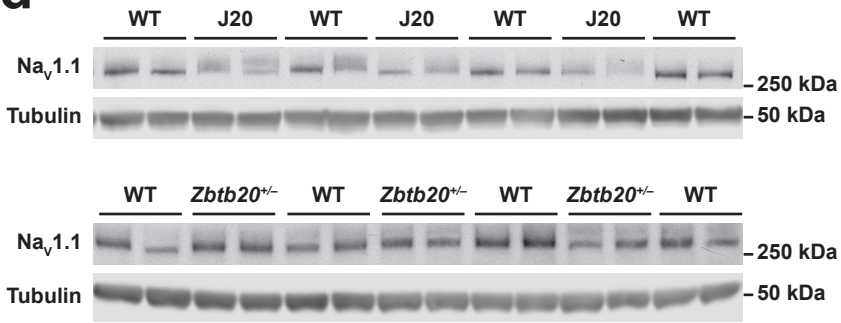
a



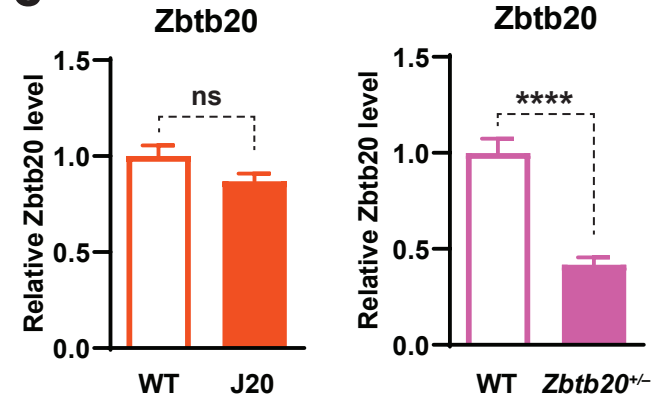
b



d



c



e

