

Further Characterization of Glycoform-selective Prions of Variably Protease-Sensitive Prionopathy

Weiguanliu Zhang^{1,2}, Xiangzhu Xiao², Mingxuan Ding^{1,2}, Jue Yuan², Aaron Foutz², Mohammed Moudjou³, Tetsuyuki Kitamoto⁴, Jan Langeveld⁵, Li Cui^{1§}, Wen-Quan Zou^{2,6§}

¹Department of Neurology, The First Hospital of Jilin University, Changchun, Jilin Province, China.

²Department of Pathology, Case Western Reserve University School of Medicine, Cleveland, Ohio 44106, USA.

³Université Paris Saclay, INRAE, UVSQ, VIM, Jouy-en-Josas, France.

⁴Department of Neurological Science, Tohoku University Graduate School of Medicine, 2-1 Seiryo-machi, Aoba-ku, Sendai, Miyagi 980-8575, Japan.

⁵Department of Infection Biology, Wageningen Bioveterinary Research, 12 8221RA 39 Lelystad, The Netherlands.

⁶National Prion Disease Pathology Surveillance Center, Case Western Reserve University School of Medicine, Cleveland, Ohio 44106, USA.

§Corresponding authors: Wen-Quan Zou: wxz6@case.edu; Li Cui: chuili1967@126.com

Supplementary Table S1

Table S1 Summary of findings made in this study

Measurements		Antibody mapping									RT-QuIC assay		
		1E4 97-105	3F4 106-112	9A2 99-101	12B2 90-94	V14 168-181	Bar209 185-196	Anti-C 220-231	Tohoku 2 97-103	EP1802Y 217-226	Seeding activities (SD ₅₀)	Lag Time (h)	
PrP^{res} fragments													
sCJD PrP ^{res}	Types	T1 (82-231)	-/+*	+¶	+	+	+	+	-§	-	8.6	4.3	
		T2 (97-231)	+	+	+	-	+	+	+	+			
	sCJD-CTF13 (154-231)		-	-	-	-	+	+	-	+			
	sCJD-CTF12 (162-231)		-	-	-	-	+	+	-	+			
GSS ^{P102L} PrP7-8 (82-153)		-	+	+	+	n/d**	n/d	-	n/d	-	7.7	26.0	
VPSP _r PrP ^{res}	pH 7.4	VPSP _r -N20 (86-231)	+	-/+	+	-/+	n/d	n/d	+	+	VPSP _r 129MM	7.0	23.1
		VPSP _r -C18 (104-231)	-	-	-	-	+	+	+	-			
		VPSP _r -N17 (86-?)	+	-/+	+	-	n/d	n/d	-	+			
		VPSP _r -C12/13 (158-231)	-	-	-	-	+	+	+	-			
		VPSP _r -C8-9 (190-231)	-	-	-	-	-	n/d	+	-			
		VPSP _r -N7 (86-145)	+	- (+ in 2D)	-/+	-	-	-	-	+			
	pH 8.0	VPSP _r -N20 (86-231)	+	+	n/d	n/d	n/d	n/d	n/d	n/d	VPSP _r 129MV	6.1	31.1
		VPSP _r -C18 (104-231)	-	-	n/d	n/d	n/d	n/d	n/d	n/d			
		VPSP _r -N17 (86-?)	+	+	n/d	n/d	n/d	n/d	n/d	n/d			
		VPSP _r -C12/13 (158-231)	-	-	n/d	n/d	n/d	n/d	n/d	n/d			
		VPSP _r -C8-9(190-231)	-	-	n/d	n/d	n/d	n/d	n/d	n/d			
fCJD ^{V180I}		+	-/+	n/d	n/d	n/d	n/d	n/d	n/d	n/d	5.7	36.7	

Note: *: Weak reaction; ¶: positive reaction; §: no reaction; **: not detected in this study.

