

Additional file 3. Epitopes of the nucleocapsid protein N of PRRSV

Strain	Position ^{a)}	Epitope ^{b)}	References	
LV	2-12	AGKNQ S QKKKK	[33]	
		AGKNQ G QKKKK		
	25-30	QLCQLL		
		QLCQLL		
	40-46	QPRGGQA		
		QPRGGQA		
	51-67 + 80-90♣	PEKPHFPLAAEDDIRHH + IQTAFNQGAG T		
		PEKPHFPLAAEDDIRHH + IQTAFNQGAG A		
	25-34	QLCQLLGAMI		[29]
		QLCQLLGAMI		
	31-40	GAMI K SQRQQ		
		GAMI R TQRQQ		
	46-55	AKKK K PEKPH		
		AKKK R PEKPH		
	44-71	GQAKKK K PEKPHFPLAAEDDIRHHLTQT		
GQAKKK R PEKPHFPLAAEDDIRHHLTQT				
50-93	K PEKPHFPLAAEDDIRHHLTQTERS LCLQSIQTAFNQGAG T ASL			
	R PEKPHFPLAAEDDIRHHLTQTERS LCLQSIQTAFNQGAG A ASL			
50-58♦	K PEKPHFPL	[39]		
	R PEKPHFPL			
64-72♦	IRHHLTQTE			
	IRHHLTQTE			
105-113♦	FMLPVAHTV			
	FMLPVAHTV			
113-121♦	VRLIRVTST			
	VRLIRVTST			
VR-2332	21-48	QLCQMLGKIIAQQNQSRGKPGKKNKKK	[29]	
	26-34	LGKIIAQQN		
	30-57	IAQQNQSRGKPGKKNKKKNPEKPHFPL		
	36-46	SRGKPGKKNK		
	42-50	GKKNKKKNP		
	43-70	KKNKKKNPEKPHFPLATEDDVRHHFTPS		
	48-57	KNPEKPHFPL		
	63-92	VRHHFTPSE RQLCLSSIQTAFNQGAGTCTL		
	103-123	EFSLPTHHTVRLIRVTASPSA		
	PA-8	30-52♣		IVQQNQSRGKPGKKNKKKNPEK
37-57		RGKPGKKNKKKNPEKPHFLL		
52-69		KPHFLLATEDDVRHHFTP		
112-123♣		VRLIRVTASPSA		
Jxwn06	49-57♦	N PEKPHFPL	[38]	
		R PEKPHFPL		
	104-120♦	F SLP T QHTVRLIR A T A S F MLP V AHTVRLIR V T S T		

^{a)} SDOW17 epitopes are highlighted by the symbol ♣ whereas T cell epitopes are indicated by ♦

^{b)} For the epitopes of LV and Jxwn06, the second row shows the corresponding sequence of IVI-1173 with the differences highlighted with red bold characters.