

Peptide Arrays, *Yersinia pestis* V Antigen

Catalog No. NR-2867

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Product Description: The 53-peptide array spans the V antigen of the gram-negative bacterium *Yersinia pestis* (GenPept: CAB54908). Peptides are 15- to 17-mers, with 11 or 12 amino acid overlaps.

Lot: N419-1 to 53

The following information applies to all peptides:

- | | |
|--------------------------|--------------------------|
| • Appearance | White lyophilized powder |
| • Mass spectral analysis | Correct MW by MALDI-TOF |
| • Counter Ion | Trifluoroacetate |

Peptide-specific information is shown in the two tables below.

Table 1							
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
1 of 53	5/23/2006	17	1 MIRAYEQNPQHFIEDLE 17	2133.39	-0.93	98.5%	86.2%
2 of 53	5/23/2006	17	6 EQNPQHFIEDLEKVRVE 22	2110.33	-1.28	98.0%	82.2%
3 of 53	5/23/2006	17	12 FIEDLEKVRVEQLTGHG 28	1970.23	-0.43	96.6%	81.2%
4 of 53	5/23/2006	17	18 KVRVEQLTGHGSSVLEE 34	1868.09	-0.5	94.3%	80.4%
5 of 53	5/23/2006	17	24 LTGHGSSVLEELVQLVK 40	1809.11	0.42	99.1%	84.1%
6 of 53	5/23/2006	17	30 SVLEELVQLVKDKNIDI 46	1955.30	0.2	99.2%	85.1%
7 of 53	5/23/2006	17	36 VQLVKDKNIDISIKYDP 52	1988.33	-0.42	90.0%	81.4%
8 of 53	5/23/2006	17	42 KNIDISIKYDPRKDSEV 58	2020.29	-1.21	94.6%	78.0%
9 of 53	5/23/2006	17	48 IKYDPRKDSEVFANRVI 64	2050.36	-0.74	92.9%	78.3%
10 of 53	5/23/2006	17	54 KDSEVFANRVITDDIEL 70	1964.18	-0.3	95.8%	85.2%
11 of 53	5/23/2006	17	60 ANRVITDDIELLKKILA 76	1925.32	0.34	90.3%	80.9%
12 of 53	5/23/2006	17	66 DDIELLKKILAYFLPED 82	2035.38	0.04	97.8%	85.6%
13 of 53	5/23/2006	17	72 KKILAYFLPEDAILKGG 88	1876.29	0.26	92.9%	80.5%
14 of 53	5/23/2006	17	78 FLPEDAILKGGHYDNLQ 94	1930.16	-0.46	98.0%	85.0%
15 of 53	5/23/2006	17	84 ILKGGHYDNLQNGIKR 100	1954.24	-1.11	91.3%	77.4%
16 of 53	5/23/2006	17	90 YDNQLQNGIKRVKEFLE 106	2094.37	-1.14	98.9%	82.1%
17 of 53	5/23/2006	17	96 NGIKRVKEFLESSPNTQ 112	1947.20	-1.11	96.0%	81.0%
18 of 53	5/23/2006	17	102 KEFLESSPNTQWELRAF 118	2082.32	-0.92	93.7%	85.9%
19 of 53	5/23/2006	17	108 SPNTQWELRAFMVMHF 124	2065.42	-0.07	83.1%	85.8%
20 of 53	5/23/2006	17	114 ELRAFMVMHFSLTADR 130	1995.37	0.35	96.6%	81.4%
21 of 53	5/23/2006	17	120 AVMHFSLTADRIDDIL 136	1932.20	0.35	86.5%	85.0%
22 of 53	5/23/2006	17	126 LTADRIDDILKIVIDS 142	1901.16	0.23	93.0%	84.8%
23 of 53	5/23/2006	17	132 DDDILKIVIDSMNHHGD 148	1923.10	-0.55	98.3%	80.8%
24 of 53	5/23/2006	17	138 VIVDSMNHHGDARSKLR 154	1935.21	-0.67	99.6%	73.9%
25 of 53	5/23/2006	17	144 NHHGDARSKLRELAEL 160	1975.17	-1.35	98.5%	74.3%

Table 1

Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Hydrophilicity	Purity by HPLC ^a	Peptide Content ^b
26 of 53	5/23/2006	17	150 RSKLREELAELTAEIKI 166	1999.36	-0.53	92.1%	77.8%
27 of 53	5/23/2006	17	156 ELAELTAEIKIYSVIQA 172	1891.21	0.55	98.6%	89.2%
28 of 53	5/23/2006	17	162 AELKIYSVIAEINKHL 178	1969.33	0.11	98.0%	81.2%
29 of 53	5/23/2006	17	168 SVIAEINKHLSSSGTI 184	1784.01	0.08	94.8%	84.0%
30 of 53	5/23/2006	17	174 INKHLSSSGTINIHDKS 190	1851.07	-0.69	89.3%	76.5%
31 of 53	5/23/2006	17	180 SSGTINIHDKSINLMDK 196	1873.13	-0.55	93.2%	80.4%
32 of 53	5/23/2006	17	186 IHDKSINLMDKNLYGYT 202	2025.33	-0.65	96.2%	81.6%
33 of 53	5/23/2006	17	192 NLMDKNLYGYTDEEIFK 208	2093.36	-0.92	90.0%	86.0%
34 of 53	5/23/2006	17	198 LYGYTDEEIFKASAEYK 214	2027.23	-0.76	94.0%	85.6%
35 of 53	5/23/2006	17	204 EEIFKASAEYKILEKMP 220	2026.40	-0.49	82.1%	81.6%
36 of 53	5/23/2006	17	210 SAEYKILEKMPQTTIQV 226	1979.34	-0.36	94.8%	85.3%
37 of 53	5/23/2006	17	216 LEKMPQTTIQVDGSEKK 232	1932.24	-1.12	80.5%	81.0%
38 of 53	5/23/2006	17	222 TTIQVDGSEKKIVSIKD 238	1861.14	-0.42	93.9%	80.3%
39 of 53	5/23/2006	17	228 GSEKKIVSIKDFLGSEN 244	1851.10	-0.54	95.8%	80.2%
40 of 53	5/23/2006	17	234 VSIKDFLGSENKRTGAL 250	1835.11	-0.29	97.8%	80.1%
41 of 53	5/23/2006	17	240 LGSENKRTGALGNLKNS 256	1758.97	-0.98	97.2%	79.4%
42 of 53	5/23/2006	17	246 RTGALGNLKNSYSYNKD 262	1901.08	-1.33	100.0%	80.7%
43 of 53	5/23/2006	17	252 NLKNSYSYNKDNNELSH 268	2040.15	-1.94	100.0%	81.7%
44 of 53	5/23/2006	17	258 SYNKDNNELSHFATTCS 274	1931.04	-1.11	100.0%	85.0%
45 of 53	5/23/2006	17	264 NELSHFATTCSDKSRPL 280	1906.12	-0.75	96.5%	80.7%
46 of 53	5/23/2006	17	270 ATTCSDKSRPLNDLVSQ 286	1835.04	-0.69	97.7%	84.3%
47 of 53	5/23/2006	17	276 KSRPLNDLVSQKTTQLS 292	1915.19	-0.95	100.0%	80.8%
48 of 53	5/23/2006	17	282 DLVSQKTTQLSDITSRF 298	1939.17	-0.46	100.0%	85.0%
49 of 53	5/23/2006	17	288 TTQLSDITSRFNSAIEA 304	1854.02	-0.22	99.6%	89.1%
50 of 53	5/23/2006	17	294 ITSRFNSAIEALNRFIQ 310	1980.27	0.07	99.4%	85.3%
51 of 53	5/23/2006	17	300 SAIEALNRFIQKYDSVM 316	1985.31	0	96.1%	85.3%
52 of 53	5/23/2006	17	306 NRFIQKYDSVMQRLDD 322	2141.45	-0.88	99.4%	82.5%
53 of 53	5/23/2006	15	312 YDSVMQRLDDTSGK 326	1727.93	-0.85	89.7%	83.5%

^a% full-length
^bRemainder is salt and water

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
1 of 53	Expected	1.00	1.00	2.00		5.00		1.00	2.00	1.00		1.00	1.00	1.00				1.00	
	Actual	0.81	1.04	1.92		4.66		1.05	1.72	1.02		0.81	1.04	0.96				1.00	
2 of 53	Expected		1.00	2.00		6.00		1.00	1.00	1.00	1.00		1.00	1.00					2.00
	Actual		0.85	1.78		5.65		1.06	0.83	0.99	1.07		1.07	1.00					1.68
3 of 53	Expected		1.00	1.00		4.00	2.00	1.00	1.00	2.00	1.00		1.00			1.00			2.00
	Actual		0.89	0.92		3.42	2.17	1.08	0.79	1.71	1.00		1.08			0.82			1.80
4 of 53	Expected		1.00			4.00	2.00	1.00		2.00	1.00				2.00	1.00			3.00
	Actual		0.81			3.63	2.09	1.12		1.74	1.00				1.78	0.88			2.95
5 of 53	Expected					3.00	2.00	1.00		4.00	1.00				2.00	1.00			3.00
	Actual					3.08	2.21	1.14		3.89	1.00				1.84	0.89			2.61

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
6 of 53	Expected			3.00		3.00			2.00	3.00	2.00				1.00				3.00
	Actual			3.06		2.72			1.90	3.00	1.91				0.95				2.83
7 of 53	Expected			4.00		1.00			3.00	1.00	3.00			1.00	1.00			1.00	2.00
	Actual			3.83		0.97			2.93	1.00	2.81			1.14	1.03			1.10	1.82
8 of 53	Expected		1.00	4.00		1.00			3.00		3.00			1.00	2.00			1.00	1.00
	Actual		1.16	3.91		0.96			2.60		3.00			1.10	1.94			1.11	1.04
9 of 53	Expected	1.00	2.00	3.00		1.00			2.00		2.00		1.00	1.00	1.00			1.00	2.00
	Actual	0.94	2.02	3.02		0.95			1.11 ^a		1.91		0.92	1.00	0.96			1.12	1.18 ^a
10 of 53	Expected	1.00	1.00	4.00		2.00			2.00	1.00	1.00		1.00		1.00	1.00			2.00
	Actual	0.93	1.10	4.19		2.01			1.45 ^a	1.18	1.19		1.00		0.96	0.99			1.29 ^a
11 of 53	Expected	2.00	1.00	3.00		1.00			3.00	3.00	2.00					1.00			1.00
	Actual	1.79	1.14	3.15		0.94			2.63 ^a	3.00	2.15					0.94			0.90 ^a
12 of 53	Expected	1.00		3.00		2.00			2.00	4.00	2.00		1.00	1.00				1.00	
	Actual	0.87		2.94		1.70			1.72	3.93	2.00		1.11	0.95				1.06	
13 of 53	Expected	2.00		1.00		1.00	2.00		2.00	3.00	3.00		1.00	1.00				1.00	
	Actual	1.98		1.03		1.07	1.97		1.97	3.00	2.87		1.19	1.14				1.17	
14 of 53	Expected	1.00		3.00		2.00	2.00	1.00	1.00	3.00	1.00		1.00	1.00				1.00	
	Actual	0.90		2.77		1.81	2.03	1.08	0.94	2.87	1.00		1.12	0.94				1.00	
15 of 53	Expected		1.00	3.00		2.00	3.00	1.00	2.00	2.00	2.00							1.00	
	Actual		1.08	2.91		1.73	2.92	1.05	1.82	1.96	2.00							1.19	
16 of 53	Expected		1.00	3.00		4.00	1.00		1.00	2.00	2.00		1.00					1.00	1.00
	Actual		1.10	2.98		3.64	1.07		0.95	1.92	2.00		1.16					1.07	0.96
17 of 53	Expected		1.00	2.00		3.00	1.00		1.00	1.00	2.00		1.00	1.00	2.00	1.00			1.00
	Actual		0.97	1.80		2.84	1.05		0.80	1.00	1.82		1.15	1.01	1.67	0.84			0.79
18 of 53	Expected	1.00	1.00	1.00		4.00				2.00	1.00		2.00	1.00	2.00	1.00	1.00		
	Actual	1.12	1.02	0.94		3.84				1.81	1.01		2.00	1.04	1.64	0.80	0.00 ^b		
19 of 53	Expected	2.00	1.00	1.00		2.00		1.00		1.00		2.00	2.00	1.00	1.00	1.00	1.00		1.00
	Actual	1.73	1.14	0.96		1.77		1.01		1.00		2.00	2.00	1.00	0.85	0.85	0.00 ^b		0.90
20 of 53	Expected	3.00	2.00	1.00		1.00		1.00		2.00		2.00	2.00		1.00	1.00			1.00
	Actual	2.92	1.82	0.93		0.77		1.06		1.96		1.70	2.00		0.82	1.01			0.89
21 of 53	Expected	2.00	1.00	4.00				1.00	2.00	2.00		1.00	1.00		1.00	1.00			1.00
	Actual	1.69	0.96	3.62				0.99	1.86	1.80		0.82	1.00		0.82	0.85			0.81
22 of 53	Expected	1.00	1.00	5.00					3.00	2.00	1.00				1.00	1.00			2.00
	Actual	1.00	1.14	5.12					1.97 ^a	1.92	1.08				1.03	1.15			1.37 ^a
23 of 53	Expected			6.00			1.00	2.00	2.00	1.00	1.00	1.00			1.00				2.00
	Actual			5.62			1.01	2.19	1.12 ^a	1.00	1.07	0.74			1.06				1.33 ^a
24 of 53	Expected	1.00	2.00	3.00			1.00	2.00	1.00	1.00	1.00	1.00			2.00				2.00
	Actual	0.91	2.00	2.90			1.02	2.12	0.47 ^a	0.96	1.00	0.99			1.78				1.17 ^a
25 of 53	Expected	2.00	2.00	2.00		3.00	1.00	2.00		3.00	1.00				1.00				
	Actual	1.78	2.00	1.96		2.54	1.01	2.18		2.70	0.98				0.96				
26 of 53	Expected	2.00	2.00			4.00			1.00	4.00	2.00				1.00	1.00			
	Actual	1.84	1.97			3.94			0.92	3.77	2.00				0.97	0.99			
27 of 53	Expected	3.00				4.00			2.00	3.00	1.00				1.00	1.00		1.00	1.00
	Actual	2.72				3.82			0.95 ^a	2.62	0.96				0.77	0.75		1.00	0.48 ^a
28 of 53	Expected	2.00		1.00		3.00		1.00	3.00	2.00	2.00				1.00			1.00	1.00
	Actual	1.89		1.06		2.80		1.09	1.81 ^a	2.00	1.95				0.94			0.89	0.45 ^a
29 of 53	Expected	1.00		1.00		2.00	1.00	1.00	3.00	1.00	1.00				4.00	1.00			1.00
	Actual	0.89		0.99		1.88	1.04	1.12	1.88 ^a	1.00	0.98				3.72	0.76			0.50 ^a
30 of 53	Expected			3.00			1.00	2.00	3.00	1.00	2.00				4.00	1.00			
	Actual			2.95			1.15	1.95	2.83	1.00	1.91				3.62	0.96			

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
31 of 53	Expected			4.00			1.00	1.00	3.00	1.00	2.00	1.00			3.00	1.00			
	Actual			3.84			0.92	0.91	2.91	1.00	2.08	0.79			2.97	0.76			
32 of 53	Expected			4.00			1.00	1.00	2.00	2.00	2.00	1.00			1.00	1.00		2.00	
	Actual			3.81			1.12	1.07	1.76	1.86	1.84	1.00			0.92	0.89		2.16	
33 of 53	Expected			4.00		2.00	1.00		1.00	2.00	2.00	1.00	1.00			1.00		2.00	
	Actual			3.70		1.80	1.19		0.91	2.00	2.00	1.13	1.05			1.00		2.09	
34 of 53	Expected	2.00		1.00		3.00	1.00		1.00	1.00	2.00		1.00		1.00	1.00		3.00	
	Actual	1.70		1.01		3.19	1.12		0.78	1.01	1.97		1.00		0.97	0.89		3.00	
35 of 53	Expected	2.00				4.00			2.00	1.00	3.00	1.00	1.00	1.00	1.00			1.00	
	Actual	1.77				3.90			1.83	0.93	3.06	1.00	1.00	1.10	0.89			1.11	
36 of 53	Expected	1.00				4.00			2.00	1.00	2.00	1.00		1.00	1.00	2.00		1.00	1.00
	Actual	0.94				4.14			1.72	0.86	1.93	1.10		1.11	0.93	1.62		1.17	1.00
37 of 53	Expected			1.00		4.00	1.00		1.00	1.00	3.00	1.00		1.00	1.00	2.00			1.00
	Actual			1.16		3.97	1.15		0.85	0.99	2.91	0.98		1.06	1.01	1.79			1.00
38 of 53	Expected			2.00		2.00	1.00		3.00		3.00				2.00	2.00			2.00
	Actual			1.80		1.82	1.00		1.81 ^a		3.06				1.82	1.80			1.33 ^a
39 of 53	Expected			2.00		2.00	2.00		2.00	1.00	3.00		1.00		3.00				1.00
	Actual			2.06		2.01	2.00		0.98 ^a	1.02	2.94		1.17		2.62				0.48 ^a
40 of 53	Expected	1.00	1.00	2.00		1.00	2.00		1.00	2.00	2.00		1.00		2.00	1.00			1.00
	Actual	0.94	1.00	1.94		0.94	1.85		0.83	1.97	1.84		1.00		1.66	0.89			0.86
41 of 53	Expected	1.00	1.00	3.00		1.00	3.00			3.00	2.00				2.00	1.00			
	Actual	0.95	1.07	2.80		0.97	3.05			2.85	2.00				1.96	0.94			
42 of 53	Expected	1.00	1.00	4.00			2.00			2.00	2.00				2.00	1.00		2.00	
	Actual	0.94	1.05	3.72			1.95			1.83	2.00				1.82	0.98		1.96	
43 of 53	Expected			6.00		1.00		1.00		2.00	2.00				3.00			2.00	
	Actual			5.77		0.94		1.00		1.84	2.12				2.62			2.07	
44 of 53	Expected	1.00		4.00	1.00	1.00		1.00		1.00	1.00		1.00		3.00	2.00		1.00	
	Actual	0.99		3.77	0.36 ^c	0.92		0.95		0.95	1.05		1.00		2.76	1.68		0.99	
45 of 53	Expected	1.00	1.00	2.00	1.00	1.00		1.00		2.00	1.00		1.00	1.00	3.00	2.00			
	Actual	0.93	0.94	2.00	0.37 ^c	0.90		0.89		1.92	1.09		1.00	0.98	2.75	1.75			
46 of 53	Expected	1.00	1.00	3.00	1.00	1.00				2.00	1.00			1.00	3.00	2.00			1.00
	Actual	1.01	1.09	2.89	0.32 ^c	1.01				2.10	1.05			1.10	2.81	1.81			1.00
47 of 53	Expected		1.00	2.00		2.00				3.00	2.00			1.00	3.00	2.00			1.00
	Actual		1.07	1.95		1.88				2.90	1.85			1.09	2.91	1.84			1.00
48 of 53	Expected		1.00	2.00		2.00			1.00	2.00	1.00		1.00		3.00	3.00			1.00
	Actual		1.05	2.02		1.73			1.00	1.89	1.02		1.04		2.98	3.00			0.87
49 of 53	Expected	2.00	1.00	2.00		2.00			2.00	1.00			1.00		3.00	3.00			
	Actual	1.80	1.02	2.00		1.81			2.04	1.00			1.08		2.96	2.75			
50 of 53	Expected	2.00	2.00	2.00		2.00			3.00	1.00			2.00		2.00	1.00			
	Actual	1.92	2.02	1.92		1.88			2.76	1.11			2.00		1.72	0.90			
51 of 53	Expected	2.00	1.00	2.00		2.00			2.00	1.00	1.00	1.00	1.00		2.00			1.00	1.00
	Actual	1.80	0.97	1.73		1.86			1.82	1.06	0.98	0.88	1.00		1.72			1.03	0.89
52 of 53	Expected		2.00	4.00		2.00			1.00	2.00	1.00	1.00	1.00		1.00			1.00	1.00
	Actual		2.00	3.67		1.86			0.79	1.82	0.98	1.00	1.07		0.88			1.11	0.93
53 of 53	Expected		1.00	3.00		1.00	1.00			2.00	1.00	1.00			2.00	1.00		1.00	1.00
	Actual		1.00	2.91		0.97	0.96			1.88	1.11	1.00			1.76	0.95		1.17	1.00

^aVal-Ile, Val-Val, Ile-Ile and/or Ile-Val bonds were only partially destroyed during hydrolysis

^bTrp was completely destroyed during hydrolysis

^cCys was partially destroyed during hydrolysis

Date: 14 JUL 2006**Signature:** Signature on File**Title:** Technical Manager, BEI Authentication

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