

Certificate of Analysis for NR-438

Peptide Array West Nile Virus Protein NS2b

Catalog No. NR-438

This reagent is the tangible property of the U.S. Government.

Product Description: A 16-peptide array spanning the NS2b protein of the NY99-flamingo382-99 strain of West Nile Virus. Peptides are 16- to 20-mers, with 10 amino acid overlaps. Each vial contains 1 mg of lyophilized NR-438.

Lot: 3745093

The following information applies to all 16 peptides:

- Appearance
- Mass spectral analysis
- Counter Ion

White lyophilized powder
Electrospray "Exhibits correct MW"
Trifluoroacetate

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

Table 1						
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
1	8/9/04	18	GWPATEVMTAVGLMFAIV	1893.3	54.51%	89%
2	8/11/04	18	TAVGLMFAIVGGGLAELDI	1790.2	23.20%	88%
3	8/10/04	17	IVGGLAELDIDSMaipm	1745.1	77.26%	88%
4	7/8/04	18	LDIDSMaipmtIAGLMFA	1910.4	90.54%	89%
5	8/11/04	17	PMTIAGLMFAAFVISGK	1754.2	30.16%	88%
6	8/10/04	18	MFAAFVISGKSTDMWIER	2089.5	64.75%	85%
7	7/2/04	16	GKSTDMWIERTADISW	1896.1	90.62%	84%
8	8/9/04	16	WIERTADISWESDAEI	1921.0	65.12%	89%
9	8/10/04	17	DISWESDAEITGSSERV	1880.9	56.33%	89%
10	8/9/04	20	AEITGSSERVDVRLDDDGNF	2195.3	32.96%	86%
11	8/9/04	18	DVRLDDDGNFQLMNDPGA	1992.1	54.79%	89%
12	7/1/04	18	NFQLMNDPGAPWKIWMLR	2217.6	91.09%	85%
13	8/16/04	18	GAPWKIWMLRMVCLAISA	2046.6	43.71%	86%
14	8/11/04	17	LRMVCLAISAYTPWAIL	1921.4	40.79%	89%
15	8/11/04	18	ISAYTPWAILPSVVGFWI	2020.4	24.87%	90%
16	7/5/04	17	ILPSVVGFWITLQYTKR	2021.4	92.80%	85%

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

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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	Expected	3.00				1.00	2.00		1.00	1.00		2.00	1.00	1.00		2.00	1.00		3.00
	Actual	3.02				0.98	2.01		0.77	1.00		2.01	1.00	1.00		2.00	0.00 ^b		2.74 ^a
2	Expected	3.00		1.00		1.00	3.00		2.00	3.00		1.00	1.00			1.00			2.00
	Actual	2.98		1.00		1.00	3.01		1.76 ^a	3.01		1.00	1.00			1.01			1.72 ^a
3	Expected	2.00		2.00		1.00	2.00		3.00	2.00		2.00		1.00	1.00				1.00
	Actual	2.01		2.00		1.00	1.99		2.78 ^a	2.01		1.98		1.00	1.00				0.75 ^a
4	Expected	3.00		2.00			1.00		3.00	2.00		3.00	1.00	1.00	1.00	1.00			
	Actual	3.02		2.01			1.00		3.00	1.97		2.98	1.01	1.00	1.00	1.00			
5	Expected	3.00					2.00		2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			1.00
	Actual	2.97					2.01		1.80 ^a	1.00	1.00	2.01	1.98	1.01	1.00	1.00			0.76 ^a
6	Expected	2.00	1.00	1.00		1.00	1.00		2.00		1.00	2.00	2.00		2.00	1.00	1.00		1.00
	Actual	2.01	1.00	1.00		1.00	1.00		1.73 ^a		0.99	1.97	2.01		2.02	1.00	0.00 ^b		0.76 ^a
7	Expected	1.00	1.00	2.00		1.00	1.00		2.00		1.00	1.00			2.00	2.00	2.00		
	Actual	1.00	1.00	1.98		1.00	1.01		2.01		1.00	1.00			2.00	2.02	0.00 ^b		
8	Expected	2.00	1.00	2.00		3.00			3.00						2.00	1.00	2.00		
	Actual	2.00	1.00	2.02		2.97			3.01						2.00	1.01	0.00 ^b		
9	Expected	1.00	1.00	2.00		3.00	1.00		2.00						4.00	1.00	1.00		1.00
	Actual	1.00	1.00	1.99		3.02	1.00		2.01						3.97	1.00	0.00 ^b		1.00
10	Expected	1.00	2.00	5.00		2.00	2.00		1.00	1.00			1.00		2.00	1.00			2.00
	Actual	0.98	2.01	5.04		1.97	1.99		1.00	1.00			1.00		2.01	1.00			2.03
11	Expected	1.00	1.00	7.00		1.00	2.00			2.00		1.00	1.00	1.00					1.00
	Actual	1.01	1.00	6.94		1.00	2.02			2.01		1.01	1.00	0.99					1.00
12	Expected	1.00	1.00	3.00		1.00	1.00		1.00	2.00	1.00	2.00	1.00	2.00			2.00		
	Actual	1.00	1.00	3.02		1.00	1.00		1.01	2.00	0.98	1.98	1.01	2.01			0.00 ^b		
13	Expected	3.00	1.00		1.00		1.00		2.00	2.00	1.00	2.00		1.00	1.00		2.00		1.00
	Actual	2.98	1.00		0.53 ^b		1.00		2.01	1.98	1.00	2.00		1.00	1.00		0.00 ^b		1.00
14	Expected	3.00	1.00		1.00				2.00	3.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
	Actual	3.01	1.00		0.55 ^b				2.01	2.99		1.00		1.00	1.00	1.00	0.00 ^b	1.00	1.00
15	Expected	2.00					1.00		3.00	1.00			1.00	2.00	2.00	1.00	2.00	1.00	2.00
	Actual	1.98					1.00		2.97	1.00			1.02	2.01	1.99	1.00	0.00 ^b	1.00	2.03
16	Expected		1.00			1.00	1.00		2.00	2.00	1.00		1.00	1.00	1.00	2.00	1.00	1.00	2.00
	Actual		1.00			0.98	0.99		2.01	2.00	1.00		1.01	1.01	1.02	1.99	0.00 ^b	1.00	1.49 ^a

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

^bCys and/or Trp were completely or partially destroyed during hydrolysis

Date: 23 JUL 2014

Signature:

Dorothy C. Young

Title:

Technical Manager, BEI Authentication

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