

Peptide Array, SARS-Related Coronavirus 2 Envelope (E) Protein

Catalog No. NR-52405

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Product Description:

The 10-peptide array spans the envelope (E) protein of the USA-WA1/2020 strain of severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2; GenPept: [QHO60596](#)). Peptides are 17- or 12-mers, with 10 amino acid overlaps.

Lot: A4075-1 to A4075-10

Manufacturing Date: 31MAR2020

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The following information applies to all peptides:

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

Peptide-specific information is shown in the tables and figures below.

Table 1: Peptide Analysis

Peptide	Length	Sequence	Molecular Weight (amu)	Hydrophobicity	Purity by HPLC ¹	Peptide Content ²
1 of 10	17	1-MYSFVSEETGLIVNSV-17	1876.12	47.1	87.1%	93.0%
2 of 10	17	8-ETGLIVNSVLLFLAFV-24	1836.21	64.7	98.1%	93.0%
3 of 10	17	15-NSVLLFLAFV/FLLVTL-31	1908.41	82.4	95.2%	94.0%
4 of 10	17	22-AFVVFLVTLAILTALR-38	1860.37	82.4	89.2%	88.0%
5 of 10	17	29-VTLAILTALRLCAYCCN-45	1841.29	76.5	84.5%	88.0%
6 of 10	17	36-ALRLCAYCCNIVNLSLV-52	1854.29	76.5	89.9%	88.0%
7 of 10	17	43-CCNIVNLSLVKPSFYVY-59	1948.33	64.7	95.2%	88.0%
8 of 10	17	50-SLVKPSFYVYSRVKLN-66	2014.35	47.1	93.8%	79.0%
9 of 10	17	57-YVYSRVKLNSSRVPDL-73	2010.28	41.2	88.1%	79.0%
10 of 10	12	64-NLNSSRVPDLLV-75	1326.52	41.7	95.1%	83.0%

¹Percent full length

²Remainder is salt and water

Figure 1: Amino Acid Analysis^{3,4}

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 10	Expected			1.0		2.0	1.0		1.0	1.0		1.0	1.0		3.0	2.0		1.0	3.0
	Actual			1.1		1.9	1.1		0.7	1.1		0.9	1.0		3.0	1.9		0.9	2.9
2 of 10	Expected	1.0		1.0		1.0	1.0		1.0	4.0			2.0		1.0	2.0			3.0
	Actual	1.1		0.9		1.0	1.1		0.7	4.0			2.2		1.0	1.9			3.0
3 of 10	Expected	1.0		1.0						6.0			3.0		1.0	1.0			4.0
	Actual	0.9		1.1						5.7			2.9		1.0	1.0			2.4
4 of 10	Expected	3.0	1.0						1.0	5.0			2.0			2.0			3.0
	Actual	2.8	1.0						1.0	5.0			1.9			2.0			1.4
5 of 10	Expected	3.0	1.0	1.0	3.0				1.0	4.0						2.0		1.0	1.0
	Actual	3.0	1.1	1.1	0.0				1.1	4.1						2.2		0.8	0.8
6 of 10	Expected	2.0	1.0	2.0	3.0				1.0	3.0					1.0			1.0	3.0
	Actual	1.9	1.0	2.0	0.0				0.6	3.0					1.0			1.0	3.1

Figure 1: Amino Acid Analysis (continued)^{3,4}

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)
7 of 10	Expected			2.0	2.0				1.0	1.0	1.0		1.0	1.0	2.0			2.0	4.0
	Actual			1.8	0.0				0.6	1.0	0.9		1.1	1.0	1.8			2.2	3.8
8 of 10	Expected		1.0	2.0						2.0	2.0		1.0	1.0	3.0			2.0	3.0
	Actual		1.1	2.0						2.0	1.9		1.0	1.0	3.0			2.1	2.9
9 of 10	Expected		2.0	3.0						2.0	1.0			1.0	3.0			2.0	3.0
	Actual		2.1	2.8						2.0	1.0			1.1	3.0			2.0	3.0
10 of 10	Expected		1.0	3.0						3.0				1.0	2.0				2.0
	Actual		1.1	3.0						2.9				1.0	1.8				2.1

³Cysteine (C) was completely destroyed during hydrolysis.

⁴Val-Ile, Val-Val, Ile-Ile and/or Ile-Val bonds were only partially destroyed during hydrolysis.

Table 2: Peptide Solubility

Peptide	Sequence	Solubility	Solvent
1 of 10	1-MYSFVSEETGTLIVNSV-17	1 mg/mL	70% acetonitrile in water
2 of 10	8-ETGTLIVNSVLLFLAFV-24	1 mg/mL	70% acetonitrile in water
3 of 10	15-NSVLLFLAFVVFLVTL-31	1 mg/mL	70% acetonitrile in water
4 of 10	22-AFVVFLVTLAILTALR-38	1 mg/mL	70% acetonitrile in water
5 of 10	29-VTLAILTALRLCAYCCN-45	1 mg/mL	70% acetonitrile in water
6 of 10	36-ALRLCAYCCNIVNLSLV-52	1 mg/mL	70% acetonitrile in water
7 of 10	43-CCNIVNLSLVKPSFYVY-59	1 mg/mL	70% acetonitrile in water
8 of 10	50-SLVKPSFYVYSRVKLN-66	1 mg/mL	70% acetonitrile in water
9 of 10	57-YVYSRVKLNSSRVPDL-73	1 mg/mL	70% acetonitrile in water
10 of 10	64-NLNSSRVPDLLV-75	1 mg/mL	70% acetonitrile in water

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28 MAY 2021

Program Manager or designee, ATCC Federal Solutions

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