

**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: A5737-1 to A5737-10**

**Manufacturing Date: 19FEB2021**

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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 <sup>1</sup>	Peptide Content <sup>2</sup>
1 of 10	17	1-MYSFVSEETGLIVNSV-17	1876.12	47.1	89.7%	83.0%
2 of 10	17	8-ETGLIVNSVLLFLAFV-24	1836.21	64.7	91.8%	82.0%
3 of 10	17	15-NSVLLFLAFV/FLLVTL-31	1908.41	82.4	87.6%	83.0%
4 of 10	17	22-AFVVFLVTLAILTALR-38	1860.37	82.4	81.8%	78.0%
5 of 10	17	29-VTLAILTALRLCAYCCN-45	1841.29	76.5	93.1%	78.0%
6 of 10	17	36-ALRLCAYCCNIVNVS-52	1854.29	76.5	88.7%	78.0%
7 of 10	17	43-CCNIVNVS/LVKPSFYVY-59	1948.33	64.7	80.7%	79.0%
8 of 10	17	50-SLVKPSFYVYSRVK-66	2014.35	47.1	83.0%	72.0%
9 of 10	17	57-YVYSRVK/NLNSSRPDL-73	2010.28	41.2	89.2%	72.0%
10 of 10	12	64-NLNSSRPDLLV-75	1326.52	41.7	80.2%	72.0%

<sup>1</sup>Percent full length

<sup>2</sup>Remainder is salt and water

**Figure 1: Amino Acid Analysis<sup>3,4</sup>**

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			1.0		2.0	1.1		0.7	1.0		1.0	0.9		3.0	2.1		1.0	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		1.0		1.0	1.0		0.7	3.8			2.0		0.9	2.0			2.7
3 of 10	Expected	1.0		1.0						6.0			3.0		1.0	1.0			4.0
	Actual	1.0		1.0						5.9			3.0		1.0	1.0			3.4
4 of 10	Expected	3.0	1.0						1.0	5.0			2.0			2.0			3.0
	Actual	3.0	1.1						0.8	5.0			2.0			2.2			2.6
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	1.0	1.0	0.0				1.0	3.9						2.1		1.1	0.9
6 of 10	Expected	2.0	1.0	2.0	3.0				1.0	3.0					1.0			1.0	3.0
	Actual	2.1	1.0	2.1	0.0				0.5	3.1					1.0			0.9	3.0

Figure 1: Amino Acid Analysis (continued)<sup>3,4</sup>

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			2.0	0.0				0.5	1.0	1.0		1.1	0.9	2.0			2.1	3.9
8 of 10	Expected		1.0	2.0						2.0	2.0		1.0	1.0	3.0			2.0	3.0
	Actual		1.0	2.0						2.1	1.9		1.0	1.0	2.8			2.1	3.0
9 of 10	Expected		2.0	3.0						2.0	1.0			1.0	3.0			2.0	3.0
	Actual		2.0	3.1						2.1	0.9			1.0	3.0			2.1	3.0
10 of 10	Expected		1.0	3.0						3.0				1.0	2.0				2.0
	Actual		1.0	2.9						3.0				1.0	2.0				2.0

<sup>3</sup>Cysteine (C) was completely destroyed during hydrolysis.

<sup>4</sup>Val-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-MYSFVSEETGLIVNSV-17	1 mg/mL	70% acetonitrile in water
2 of 10	8-ETGLIVNSVLLFLAFV-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-ALRLCAYCCNIVNVLV-52	1 mg/mL	70% acetonitrile in water
7 of 10	43-CCNIVNVLVKPSFYVY-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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