

SARS-CoV-2 (Spike Protein) Omicron/B.1.1.529 Mutation Peptide Pool

**SARS-CoV-2 (spike protein) Omicron/B.1.1.529 variant
mutation peptide pool for immune cell activation**

Catalog #100-1382

~25 µg (15 nmol)/peptide



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Product Description

SARS-CoV-2 (Spike Protein) Omicron/B.1.1.529 Mutation Peptide Pool is a lyophilized mixture of 80 peptides of the spike glycoprotein of SARS-CoV-2 Omicron variant (B.1.1.529). These peptides selectively cover the mutated regions in the spike protein of the SARS-CoV-2 Omicron variant compared to the wild-type regions. The virus attaches to the cell membrane of the host through the interaction between spike protein and angiotensin-converting enzyme 2 (ACE2) receptor, and the spike protein plays a critical role in viral entry (Hoffmann et al.; Walls et al.). One unit of this product (i.e. ~25 µg/peptide) is sufficient for stimulating 2.5×10^8 cells.

APPLICATIONS

- Antigen-specific T cell stimulation
- Cellular immune response
- Immune monitoring
- T cell assays
- T cell expansion

Product Information

Number of Peptides:	80
Source:	SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2), Omicron (B.1.1.529) variant
Accession Number:	P0DTC2
Protein Name:	S glycoprotein; Spike glycoprotein; Surface glycoprotein
Gene Name:	S
Purity:	Average 70%
Formulation:	Lyophilized as trifluoroacetate salts

Preparation and Storage

Storage:	Store at -20°C.
Stability:	Stable as supplied until expiry date (EXP) on label.
Preparation:	Warm to room temperature (15 - 25°C) before reconstitution. Add pure dimethyl sulfoxide (DMSO; ~40 µL) and dilute with water to the desired concentration. Final concentration of DMSO must be below 1% (v/v) to avoid toxicity in the biological system. If not used immediately, aliquot and store at -20°C. Protect from light. Avoid repeated freeze-thaw cycles.

Peptide Sequences

NO.	SEQUENCE	LENGTH	NO.	SEQUENCE	LENGTH
1	DLFLPFFSNVTWFHV	15	41	FERDISTEIYQAGNK	15
2	PFFSNVTWFHVISGT	15	42	ISTEIYQAGNKPCNG	15
3	NVTWFHVISGTNGTK	15	43	IYQAGNKPCNGVAGF	15
4	FHVISGTNGTKRFDN	15	44	GNKPCNGVAGFNCYF	15
5	VLPFNDGVYFASIEK	15	45	CNGVAGFNCYFPLKS	15
6	NDGVYFASIEKSNII	15	46	AGFNCYFPLKSYSFR	15
7	YFASIEKSNIIIRGWI	15	47	CYFPLKSYSFRPTYG	15
8	IEKSNIIIRGWIFGTT	15	48	LKSYSFRPTYGVGHQ	15
9	CEFAQCNDPFLDHKN	15	49	SFRPTYGVGHQPYRV	15
10	FCNDPFLDHKNKSW	15	50	TYGVGHQPYRVVLS	15
11	PFLDHKNKSWMESE	15	51	GHQPYRVVLSFELL	15
12	DGYFKIYSKHTPIIV	15	52	NKCVNFNFNGLKGTG	15
13	KIYSKHTPIIVREPE	15	53	NFNFNGLKGTGVLTE	15
14	KHTPIIVREPEDLPQ	15	54	NGLKGTGVLTESNKK	15
15	IIVREPEDLPQGFS	15	55	PGTNTSNQVAVLYQG	15
16	EPEDLPQGFSALEPL	15	56	TSNQVAVLYQGVNCT	15
17	RFPNITNLCPFDEVF	15	57	VAVLYQGVNCTEVPV	15
18	ITNLCPFDEVFNATR	15	58	YQGVNCTEVPVAIHA	15
19	CPFDEVFNATRFASV	15	59	QTRAGCLIGAEYVNN	15
20	NCVADYSVLYNLAPF	15	60	GCLIGAEYVNNSYEC	15
21	DYSVLYNLAPFFTFK	15	61	GAEYVNNSYECDIPI	15
22	LYNLAPFFTFKCYGV	15	62	AGICASYQTQTKSHR	15
23	APFFTFKCYGVSPTK	15	63	ASYQTQTKSHRRARS	15
24	VNHNAQALNTLVKQL	15	64	TQTKSHRRARSVASQ	15
25	AQALNTLVKQLSSKF	15	65	SHRRARSVASQSIIA	15
26	NTLVKQLSSKFGAIS	15	66	LLLQYGSFCTQLKRA	15
27	KQLSSKFGAISSVLN	15	67	YGSFCTQLKRALTGI	15
28	SKFGAISSVLNDIFS	15	68	CTQLKRALTGIAVEQ	15
29	AISSVLNDIFSRLDK	15	69	KRALTGIAVEQDKNT	15
30	VLNDIFSRLDKVEAE	15	70	QVKQIYKTPPIKYFG	15

NO.	SEQUENCE	LENGTH	NO.	SEQUENCE	LENGTH
31	IFSRLDKVEAEVQID	15	71	IYKTPPIKYFGGFNF	15
32	GDEVQRQIAPGQTGNI	15	72	PPIKYFGGFNFSQIL	15
33	RQIAPGQTGNIADYN	15	73	YFGGFNFSQILPDPS	15
34	PGQTGNIADYNYKLP	15	74	IAARDLICAQKFGL	15
35	GNIADYNYKLPPDFT	15	75	DLICAQKFGLTVLP	15
36	DFTGCVIAWNSNKLD	15	76	AQKFGLTVLPPLLT	15
37	CVIAWNSNKLDSKVS	15	77	KGLTVLPPLLTDEMI	15
38	WNSNKLDSKVSIGNYN	15	78	STASALGKLQDVVNH	15
39	KLDSKVSIGNYNLYR	15	79	ALGKLQDVVNHNAQA	15
40	KVSGNLYNYRLFRK	15	80	LQDVVNHNAQALNTL	15

Related Products

For a complete list of peptide pools, as well as related products available from STEMCELL Technologies, visit www.stemcell.com, or contact us at techsupport@stemcell.com.

References

Hoffmann M et al. (2020) SARS-CoV-2 cell entry depends on ACE2 and TMPRSS2 and is blocked by a clinically proven protease inhibitor. Cell 181(2): 271–80.

Walls AC et al. (2020) Structure, function, and antigenicity of the SARS-CoV-2 spike glycoprotein. Cell 181(2): 281–92.

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