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

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

Catalog #100-1420 ~25 µg (15 nmol)/peptide

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Product Description

SARS-CoV-2 (Spike Protein) Omicron/B.1.1.529 Peptide Pool is provided as two lyophilized mixtures (subpools) from the spike glycoprotein of SARS-CoV-2 Omicron variant (B.1.1.529). The subpools contain 158 and 157 peptides, for a total of 315 peptides. They consist of 15-mer peptides with 11-amino-acid overlaps that cover amino acids 1 - 1270 on the spike protein. 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 x 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:	158 + 157 (315 total)
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
Protein Sequence:	MFVFLVLLPLVSSQCVNLTTRTQLPPAYTNSFTRGVYYPDKVFRSSVLHSTQDLFLPFFSNVTWFHVISGTNGTKRF DNPVLPFNDGVYFASIEKSNIIRGWIFGTTLDSKTQSLLIVNNATNVVIKVCEFQFCNDPFLDHKNNKSWMESEFRVY SSANNCTFEYVSQPFLMDLEGKQGNFKNLREFVFKNIDGYFKIYSKHTPIIVREPEDLPQGFSALEPLVDLPIGINITR FQTLLALHRSYLTPGDSSSGWTAGAAAYYVGYLQPRTFLLKYNENGTITDAVDCALDPLSETKCTLKSFTVEKGIYQ TSNFRVQPTESIVRFPNITNLCPFDEVFNATRFASVYAWNRKRISNCVADYSVLYNLAPFFTFKCYGVSPTKLNDLCF TNVYADSFVIRGDEVRQIAPGQTGNIADYNYKLPDDFTGCVIAWNSNKLDSKVSGNYNYLYRLFRKSNLKPFERDIS TEIYQAGNKPCNGVAGFNCYFPLKSYGFQPTYGVGHQPYRVVVLSFELLHAPATVCGPKKSTNLVKNKCVNFNFN GLKGTGVLTESNKKFLPFQQFGRDIADTTDAVRDPQTLEILDITPCSFGGVSVITPGTNTSNQVAVLYQGVNCTEVP VAIHADQLTPTWRVYSTGSNVFQTRAGCLIGAEYVNNSYECDIPIGAGICASYQTQTKSHRRARSVASQSIIAYTMSL GAENSVAYSNNSIAIPTNFTISVTTEILPVSMTKTSVDCTMYICGDSTECSNLLLQYGSFCTQLKRALTGIAVEQDKNT QEVFAQVKQIYKTPPIKYFGGFNFSQILPDPSKPSKRSFIEDLLFNKVTLADAGFIKQYGDCLGDIAARDLICAQKFK GLTVLPPLLTDEMIAQYTSALLAGTITSGWTFGAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKLIANQFNSAIGKI QDSLSSTASALGKLQDVVNHNAQALNTLVKQLSSKFGAISSVLNDIFSRLDKVEAEVQIDRLITGRLQSLQTYVTQQ LIRAAEIRASANLAATKMSECVLGQSKRVDFCGKGYHLMSFPQSAPHGVVFLHVTYVPAQEKNFTTAPAICHDGKA HFPREGVFVSNGTHWFVTQRNFYEPQIITTDNTFVSGNCDVVIGIVNNTVYDPLQPELDSFKEELDKYFKNHTSPDV DLGDISGINASVVNIQKEIDRLNEVAKNLNESLIDLQELGKYEQYIKWPWYIWLGFIAGLIAIVMVTIMLCCMTSCCSC LKGCCSCGSCCKFDEDDSEPVLKGVKLHYT
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. **Combination of the two subpools after reconstitution is not recommended.** 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.

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.e8.

Walls AC et al. (2020) Structure, function, and antigenicity of the SARS-CoV-2 spike glycoprotein. Cell 181(2): 281–92.e6.