

# SARS-CoV-2 (Spike Protein) Omicron BA.4/BA.5 Peptide Pool



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## SARS-CoV-2 (spike protein) Omicron BA.4/BA.5 variant peptide pool for immune cell activation

Catalog # 100-1421

~25 µg (15 nmol)/peptide

## Product Description

SARS-CoV-2 (Spike Protein) Omicron BA.4/BA.5 Peptide Pool is provided as two lyophilized mixtures (subpools) from the spike glycoprotein of SARS-CoV-2 Omicron BA.4/BA.5 subvariant. 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  $2.5 \times 10^8$  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 BA.4/BA.5 variant

**Accession Number:** P0DTC2

**Protein Name:** S glycoprotein; Spike glycoprotein; Surface glycoprotein

**Protein Sequence:** MFVFLVLLPLVSSQCVNLIIRTRQSPPAYTNSFTRGVYYPDKVFRSSVLHSTQDLFLPFFSNVTWFHVIHGTNGTKRF DNPVLPFNDGVYFASIEKSNIIIRGWIFGTLLDSKTQSLIVNNATNVVIVKVEFCFCNDPFLDVYYHKNNKSWMESEF RYSSANNCTFEYVSQPFLMDLEGKQGNFKNLREFVFNIDGYFKIYSKHTPIIGRDLPQGFSALEPLVDLPIGINITR FQTLALHRSYLTGDSGWTAGAAAYVGYLQPRTFLLKYNENGTITDAVDCALDPLSETKCTLKSFTVEKGIYQ TSNFRVQPTESIVRFPNITNLCPFDEVFNATKFAVYAWNRKRISNVCADYSVLVNFAPFFAFKCYGVSPTKLNLDLFC TNVYADSFVIRGNEVSQIAPGQTGNIADYNYKLPDDFTGCVIAWNSNKLDSKVGGNVNYRYRLFRKSNLKPFRDIS TEIYQAGNKPCNGVAGVNCYFPLRSYGFRTYGVGHQPYRVVLSFELLHAPATVCGPKKSTNLVKNKCVNFNFN GLKGTGVLTESNKKFLPFQFGRDIADTTDAVRDPQTLTLEILDITPCSFVGVITPGTNTSNQVAVLYQGVNCTEVP VAIHADQLTPTWRVYSTGNSVQTRAGCLIGAEVNNSEYCDIPGAGICASYQTQTKSHRRARVASQSIIAYTMSL GAENSVAYSNNISAIPTNFTISVTTEILPVSMTKTSVDCTMYICGDSTECNSLLLQYGSFCTQLKRALTGIAVEQDKNT QEVFAQVKQIYKTPPIKYFGGFNFSQILPDPSPKRSFIEDLLFNKVTLADAGFIKQYGDCLGDIARDLICAQKFN GLTVLPPLLTDEMIAQYTSALLAGTITSGWTFGAGAALQIPFAMQMAYRFNGIGVTQNVLYENQKLIANQFNISAIGKI QDSLSSASALGKLQDVVNHNAQALNLTLVKQLSSKFGAISSVLNDILSRLDKVEAEVQIDRLITGRLQSLQTYVTQQ LIRAAEIRASANLAATKMSECVLQSKRVDFCGKGYHLMSFPQSAPHGVVFLHVTYVPAQEKNFTTAPAICHGDKA HFPREGVFSNGTHWFVTQRNFYEPQIITDNTFVSGNCDVIGIVNNTVYDPLQPELDSFKEELDKYFKNHTSPDV DLGDISGINASVNIQKEIDRLNEVAKNLNESLIDLQELGKYEYKWPWYIWLGFIAGLIAIVMVTIMLCCMTSCCSC LKGCCSCGSCCKFDEDDSEPVLLKGVKLVHT

**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. <b>Combination of the two subpools after reconstitution is not recommended.</b> 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](http://www.stemcell.com), or contact us at [techsupport@stemcell.com](mailto: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.

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