

## SARS-CoV-2 (Omicron) ImmuneSelect Peptide Pool Premium

|                     |                                                                                                                                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalogue</b>    | 1091-07                                                                                                                                                                                                    |
| <b>Components</b>   | 7 nmol/peptide (approx. 11.6 µg), for the stimulation of $1 \times 10^8$ cells.                                                                                                                            |
| <b>Purity grade</b> | ≥95% average purity (HPLC)                                                                                                                                                                                 |
| <b>Format</b>       | Lyophilized, no additive                                                                                                                                                                                   |
| <b>Storage</b>      | Once reconstituted in sterile water, store aliquots at -20 °C or below.<br>Aliquots are stable for 6 months.<br>Do not add salts or buffers to the storage solution, as this may affect peptide stability. |

### Description

The SARS-CoV-2 (Omicron) ImmuneSelect peptide pool contains 39 peptides that cover the immunodominant sequences of SARS-CoV-2 (Omicron), derived from the following proteins:

- ◆ Spike glycoprotein
- ◆ Nucleoprotein

The peptide sequences are a mixture of MHC-I and MHC-II epitopes, and the minimum purity of any peptide is 82%, with an average purity of >95% as determined by HPLC-MS.

### Application

The *in vitro* stimulation of peripheral blood mononuclear cells (PBMCs) with SARS-CoV-2 (Omicron) ImmuneSelect Peptide Pool activates memory T cells specific to the infection, leading to cytokine secretion and the increased expression of specific surface markers. 7nmol per peptide for stimulation of up to  $10^8$  human PBMCs.

### Reconstitution of peptide pool

1. Allow the lyophilized peptide pool vial to equilibrate to room temperature before opening.
2. Add 233 µL of sterile, nuclease-free water directly to the vial to fully dissolve the contents.
3. Vortex thoroughly to ensure complete solubilization of peptides.
4. The resulting stock solution contains each peptide at a concentration of 30 nmol/mL.
5. Prepare single-use working aliquots to avoid repeated freeze-thaw cycles.
6. Store working aliquots at -20°C.

### Recommendations for *in vitro* stimulation

1. Wash PBMCs with sterile cell culture medium, centrifuge at  $300 \times g$  for 10 min, and aspirate the supernatant.
2. Resuspend PBMCs in appropriate cell culture medium at  $4 \times 10^6$  –  $1 \times 10^7$  cells/mL depending on the downstream experiment. For ELISpot assays, we recommend plating 200,000 cells/well in a 96-well plate.
3. Mix the reconstituted peptide stock thoroughly before use. Dilute the peptide stock solution in sterile cell culture medium to 2× the final working concentration (1.2 nmol/mL) and sterile-filter the solution prior to use.
4. Add the peptide solution to the wells at a 1:1 (v/v) ratio with the cell suspension, resulting in a final peptide concentration of 0.6 nmol/mL per peptide.
5. Incubate cells for desired time depending on the application.

**Note:** Incubation times can differ depending on the application. For IFN-γ ELISpot assays, an incubation period of 18–48 hours is recommended.

### Need assistance?

Contact our technical support team at [support@viraxbiolabs.com](mailto:support@viraxbiolabs.com)  
We are happy to help via email or can schedule a call on request