

## SARS-CoV-2 ImmuneSelect Peptide Pool Premium

<b>Catalogue</b>	1081-07
<b>Components</b>	7 nmol/peptide (approx. 11.6 µg), for the stimulation of $1 \times 10^8$ cells.
<b>Purity grade</b>	≥90% (HPLC)
<b>Format</b>	Lyophilized, no additive
<b>Storage</b>	Once reconstituted in sterile water, store aliquots at $-20\text{ }^{\circ}\text{C}$ or below. Aliquots are stable for 6 months. Do not add salts or buffers to the storage solution, as this may affect peptide stability.

### Description

The SARS-CoV-2 ImmuneSelect peptide pool contains 100 peptides that cover the immunodominant sequences of SARS-CoV-2 structural and non-structural proteins, derived from the following proteins:

- ◆ Nucleocapsid
- ◆ Membrane protein
- ◆ ORF1ab polyprotein
- ◆ ORF3a protein
- ◆ Spike glycoprotein

The peptide sequences are a mixture of MHC-I and MHC-II epitopes, and the minimum purity of each peptide is ≥90% as determined by HPLC-MS.

### Application

The *in vitro* stimulation of peripheral blood mononuclear cells (PBMCs) with SARS-CoV-2 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  $-20\text{ }^{\circ}\text{C}$ .

### 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  $2 \times$  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- $\gamma$  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