Product Datasheet

V1.2

Hepatitis B Virus ImmuneSelect Peptide Pool Premium

Catalogue	1215-07
Components	7 nmol/peptide (approx. 11.6 µg), for the stimulation of $1x10^8$ cells.
Purity grade	≥90% (HPLC)
Format	Lyophilized, no additive
Storage	Once reconstituted in sterile water, store aliquots at −20 °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 Hepatitis B virus (HBV) ImmuneSelect peptide pool contains 46 peptides derived from the following proteins:

- Capsid protein
- External core antigen
- Large envelope protein
- Protein P

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 Hepatitis B virus (HBV) 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 × g for 10 min, and aspirate the supernatant.
2. Resuspend PBMCs in appropriate cell culture medium at $4x10^6$ – $1x10^7$ 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**
We are happy to help via email or can schedule a call on request