Product Datasheet

V1.2

Lyme Disease ImmuneSelect Peptide Pool Premium

Catalogue	1074-07
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 Lyme Disease ImmuneSelect peptide pool contains 41 peptides from Borrelia burgdorferi (Lyme Disease Borrelia), derived from the following proteins:

- Borrelia P83/P100 antigen
- Histidine kinase
- Immunogenic protein P37
- Outer surface protein A
- Outer surface protein C

The peptide sequences cover MHC-II restricted 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 Lyme Disease 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