

T-Select PEPTIDE

# I-A<sup>b</sup> Influenza NP<sub>311-325</sub> Peptide

## QVYSLIRPNENPAHK

| Code No.  | Quantity | Concentration |
|-----------|----------|---------------|
| TS-M716-P | 100 µL   | 10 mg/mL      |

For Research Use Only. Not for administration to humans, and not for diagnostic or therapeutic use.

### Peptide Sequence

QVYSLIRPNENPAHK (15 aa)

### Origin

Influenza A/PR8 virus nucleoprotein, 311-325 aa

### MHC Restriction: I-A<sup>b</sup>

### Molecular Weight: 1,765.99 Da

### Purity: ≥90%

### Formulation: 10 mg/mL peptide solution in DMSO

Handle using aseptic techniques to avoid contamination.

### Storage Conditions

Store at -20°C. Repeated freeze-thaw cycles should be avoided.

### Background

T lymphocytes play a central role in the immune system. Major histocompatibility complex (MHC) is important for T cell recognition of surface antigen. In humans, MHC is also called human leukocyte antigen (HLA). MHCs present epitope peptides derived from both self and non-self protein, and these MHC/peptide complexes are recognized by T cells via their T-cell receptors (TCRs). In general, CD8<sup>+</sup> cytotoxic T cells (CTLs) recognize the MHC class I/peptide complex and CD4<sup>+</sup> helper T cells recognize MHC class II/peptide complex. Epitope peptides binding to class I molecules typically consist of approximately 8 to 10 consecutive amino acid residues. Meanwhile, epitope peptides binding to class II molecules are not constrained in size and can vary from 11 to 30 amino acids long.

T-Select PEPTIDE is a ready-to-use epitope peptide in liquid form and this peptide is used to produce MHC Tetramer reagent. Epitope peptides enable to stimulate CTLs in an antigen-specific manner, and also to induce T-helper immunity. Therefore, T-Select PEPTIDE series are available for T cell stimulation and expansion to examine T cell functions such as cytokine production, expression of cell surface marker, cytotoxic activity, etc.

Please refer to the data sheet of MHC Tetramer reagent which comprises this epitope peptide and I-A<sup>b</sup> (MBL, PN TS-M716-1 or -2) for more details.

### I-A<sup>b</sup> Influenza NP<sub>311-325</sub> Tetramer

TS-M716-1 I-A<sup>b</sup> Influenza NP<sub>311-325</sub> Tetramer-PE  
TS-M716-2 I-A<sup>b</sup> Influenza NP<sub>311-325</sub> Tetramer-APC

### Mouse Strain I-A Haplotypes

| MHC class II  | I-A <sup>b</sup>           | I-A <sup>d</sup>          | I-A <sup>k</sup> | I-A <sup>s</sup> | I-A <sup>g7</sup> |
|---------------|----------------------------|---------------------------|------------------|------------------|-------------------|
| Mouse strains | C57BL/<br>BXSB/Mp<br>129/- | BALB/c<br>DBA/2<br>B10.D2 | C3H/He           | SJL/J<br>B10.S   | NOD               |

### References for Influenza NP<sub>311-325</sub>

- 1) Crowe S, *et al. Vaccine* **24**: 457-467 (2006)
- 2) Teijaro J, *et al. J. Virol* **84**: 9217-9226 (2010)
- 3) Ichihashi T, *et al. PLoS ONE* **8**: e60068 (2013)
- 4) Brincks EL, *et al. J Immunol* **190**: 3438-3446 (2013)
- 5) Martinez RJ, *et al. Nat Commun* **7**: 13848 (2016)

### Related Products

Please check our web site (<https://ruo.mbl.co.jp>) for up-to-date information on products and custom MHC Tetramers.

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