

T-Select PEPTIDE

# H-2K<sup>d</sup> Influenza HA

## Peptide IYSTVASSL

<b>Code No.</b>	<b>Quantity</b>	<b>Concentration</b>
TS-M520-P	100 µL	10 mg/mL

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

**Peptide Sequence:** IYSTVASSL (9 aa)

**Origin:** Influenza A/Puerto Rico/8/34 (PR8, H1N1)  
Hemagglutinin (HA), 533-541 aa

**HLA Restriction:** H-2K<sup>d</sup>

**Molecular Weight:** 940.06 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 H-2K<sup>d</sup> (MBL, PN TS-M520-1) for more details.

### H-2K<sup>d</sup> Influenza HA Tetramers

TS-M520-1 H-2K<sup>d</sup> Influenza HA Tetramer-IYSTVASSL-PE  
TS-M520-2 H-2K<sup>d</sup> Influenza HA Tetramer-IYSTVASSL-APC  
TS-M535-1 H-2K<sup>d</sup> Influenza HA Tetramer-LYQNVGTYV-PE  
TS-M535-2 H-2K<sup>d</sup> Influenza HA Tetramer-LYQNVGTYV-APC

### Mouse Strain H-2K Haplotypes

H-2K allele	H-2K <sup>b</sup>	H-2K <sup>d</sup>	H-2K <sup>k</sup>
Mouse strains	C57BL/-, BXSB/Mp, 129/-	BALB/c, DBA/2, NOD, B10.D2	C3H/He, AKR/J

### References for This Epitope

- 1) Braciale TJ, *et al.* *PNAS* **86**: 277-281 (1989)
- 2) Sweetser MT, *et al.* *J Exp Med* **170**: 1357-1368 (1989)
- 3) Kuwano K *et al.* *Mol Immunol* **3**:163-3173 (1991)
- 4) Morgan DJ, *et al.* *J Immunol* **157**: 978-983 (1996)
- 5) Deng Y, *et al.* *J Immunol* **158**: 1507-1515 (1997)
- 6) Tamura M, *et al.* *J Virol* **72**: 9404-9406 (1998)
- 7) Nugent CT, *et al.* *J Immunol* **164**: 191-200 (2000)
- 8) Marzo AL, *et al.* *J Immunol* **165**: 6047-6055 (2000)
- 9) Lyman MA, *et al.* *J Immunol* **174**: 2563-2572 (2005)
- 10) Claassen EAW, *et al.* *J Immunol* **175**: 6597-6604 (2005)
- 11) Huang X, *et al.* *Immunology* **118**: 361-371 (2006)
- 12) Kayamuro H, *et al.* *J Virol* **84**: 12703-12712 (2010)
- 13) Zens KD, *et al.* *J Exp Med* **214**: 2915-2932 (2017)

### Related Products

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

210115-3