

T-Select PEPTIDE

H-2K^d Influenza HA

Peptide IYSTVASSL

Code No. TS-M520-P	Quantity 100 µL	Concentration 10 mg/mL
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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^d

Molecular Weight: 940 Da

Purity: ≥95%

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⁺ cytotoxic T cells (CTLs) recognize the MHC class I/peptide complex and CD4⁺ 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^d (MBL, PN TS-M520-1) for more details.

H-2K^d Influenza HA Tetramers

TS-M520-1	H-2K ^d Influenza HA Tetramer-IYSTVASSL-PE
TS-M520-2	H-2K ^d Influenza HA Tetramer-IYSTVASSL-APC
TS-M535-1	H-2K ^d Influenza HA Tetramer-LYQNVGTIV-PE
TS-M535-2	H-2K ^d Influenza HA Tetramer-LYQNVGTIV-APC

Mouse Strain H-2K Haplotypes

H-2K allele	H-2K ^b	H-2K ^d	H-2K ^k
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

MHC Class I Influenza Tetramers for Human

TS-M045-1	HLA-A*01:01 Influenza NP Tetramer-CTELKLSDY-PE
TS-0012-1C	HLA-A*02:01 Influenza M1 Tetramer-GILGFVFTL-PE
TS-M162-1	HLA-A*02:01 Influenza M1 ₅₉₋₆₈ Tetramer-ILGFVFTLTV-PE
TS-M163-1	HLA-A*02:01 Influenza NS1 ₁₂₂₋₁₃₀ Tetramer-AIMDKNIIL-PE
TB-0103-1	HLA-A*03:01 Influenza NP Tetramer-ILRGVSAHK-PE
TS-M144-1	HLA-A*24:02 Influenza PA ₁₃₀₋₁₃₈ Tetramer-YYLEKANKI-PE
TS-M145-1	HLA-A*24:02 Influenza PB1 ₂₁₆₋₂₂₄ Tetramer-SYLIRALTL-PE
TS-M146-1	HLA-A*24:02 Influenza PB1 ₄₃₀₋₄₃₈ Tetramer-RYTKTTYWW-PE

TS-M147-1 HLA-A*24:02 Influenza PB1₄₈₂₋₄₉₀ Tetramer-SYINRTGTF-PE
 TS-M148-1 HLA-A*24:02 Influenza PB1₄₈₈₋₅₀₅ Tetramer-RYGFVANF-PE
 TS-M149-1 HLA-A*24:02 Influenza PB2₅₄₉₋₅₅₇ Tetramer-TYQWIIIRNW-PE
 TB-0111-1 HLA-B*27:05 Influenza NP Tetramer-SRYWAIATR-PE
 TB-M046-1 HLA-B*35:01 Influenza NP Tetramer-LPFEKSTVM-PE

MHC Class I Influenza Tetramers for Mouse

TS-M502-1 H-2D^b Influenza NP Tetramer-ASNENMDTM-PE
 TS-M508-1 H-2D^b Influenza NP Tetramer-ASNENMETM-PE
 TS-M527-1 H-2D^b Influenza NP Tetramer-ASNENMDAM-PE
 TS-M528-1 H-2D^b Influenza PA Tetramer-SLENFRAYV-PE
 TS-M533-1 H-2K^b Influenza PB1 Tetramer-SSYRRPVGI-PE
 TS-M566-1 H-2K^b Influenza NS2 Tetramer-RTFSFQLI-PE
 TS-M520-1 H-2K^d Influenza HA Tetramer-IYSTVASSL-PE
 TS-M535-1 H-2K^d Influenza HA Tetramer-LYQNVGTIV-PE
 TB-M534-1 H-2K^d Influenza NP Tetramer-TYQRTRALV-PE

MHC Class I Control Tetramers

TS-0029-1C HLA-A*02:01 Negative Tetramer-PE
 TS-M151-1 HLA-A*02:01 Control Tetramer-ALAAAAAAV-PE
 TS-M152-1 HLA-A*11:01 Control Tetramer-ATAAAAAAK-PE
 TS-M153-1 HLA-A*24:02 Control Tetramer-AYAAAAAAL-PE
 TS-M007-1 HLA-A*24:02 Negative Tetramer-RYLDRDQQLL-PE
 TS-M008-1 H-2K^b Negative (SIY) Tetramer-SIYRYVGL-PE
 TS-M501-1 H-2K^b β-galactosidase Tetramer-DAPIYTNV-PE
 TS-M511-1 H-2L^d β-galactosidase Tetramer-TPHPARIGL-PE
 TS-M525-1 H-2K^d EGFP Tetramer-HYLSTQSAL-PE

MHC Class II Influenza Tetramers for Human

TS-M804-1 HLA-DRB1*01:01 Influenza HA₃₀₆₋₃₁₈ Tetramer-PE
 TS-M810-1 HLA-DRB1*04:01 Influenza HA₃₀₆₋₃₁₈ Tetramer-PE
 TS-M806-1 HLA-DRB1*04:05 Influenza HA₃₀₆₋₃₁₈ Tetramer-PE
 TS-M808-1 HLA-DRB1*11:01 Influenza HA₃₀₆₋₃₁₈ Tetramer-PE

MHC Class II Tetramers for Human

TS-M803-1 HLA-DRB1*01:01 EBV EBNA1₅₁₅₋₅₂₇ Tetramer-PE
 TS-M813-1 HLA-DRB1*01:01 Fel d 1₄₉₋₆₆ Tetramer-PE
 TS-M802-1 HLA-DRB1*01:01 HIV ga8₂₉₅₋₃₀₇ Tetramer-PE
 TS-M815-1 HLA-DRB1*01:01 HTLV-1 Tax₁₅₅₋₁₆₇ Tetramer-PE
 TS-M811-1 HLA-DRB1*04:01 GAD65₅₅₅₋₅₆₇ Tetramer-PE
 TS-M814-1 HLA-DRB1*04:01 Lol p 1₁₀₅₋₁₁₇ Tetramer-PE
 TS-M812-1 HLA-DRB1*11:01 TT p2₈₂₉₋₈₄₄ Tetramer-PE
 TS-M818-1 HLA-DRB1*15:01 Bet v 1₁₄₂₋₁₅₆ Tetramer-PE

MHC Class II Control Tetramers for Human

TS-M801-1 HLA-DRB1*01:01 human CLIP₁₀₃₋₁₁₇ Tetramer-PE
 TS-M809-1 HLA-DRB1*04:01 human CLIP₁₀₃₋₁₁₇ Tetramer-PE
 TS-M805-1 HLA-DRB1*04:05 human CLIP₁₀₃₋₁₁₇ Tetramer-PE
 TS-M807-1 HLA-DRB1*11:01 human CLIP₁₀₃₋₁₁₇ Tetramer-PE
 TS-M816-1 HLA-DRB1*15:01 human CLIP₁₀₃₋₁₁₇ Tetramer-PE
 TS-M817-1 HLA-DRB1*15:02 human CLIP₁₀₃₋₁₁₇ Tetramer-PE

MHC Class II Influenza and Control Tetramers for Mouse

TS-M716-1 I-A^b Influenza A NP₃₁₁₋₃₂₅ Tetramer-PE
 TS-M715-1 I-A^b human CLIP₁₀₃₋₁₁₇ Tetramer-PE

T-Select PEPTIDES

TS-5001-P H-2K^b OVA peptide, SIINFEKL
 TS-5002-P H-2D^b LCMV gp33 peptide, KAVYNFATC
 TS-5008-P H-2D^b HPV16 E7 peptide, RAHYNIVTF

TS-M501-P H-2K^b β-galactosidase peptide, DAPIYTNV
 TS-M502-P H-2D^b Influenza NP peptide, ASNENMDTM
 TS-M508-P H-2D^b Influenza NP peptide, ASNENMETM
 TS-M527-P H-2D^b Influenza NP peptide, ASNENMDAM
 TS-M534-P H-2K^d Influenza NP peptide, TYQRTRALV
 TS-M520-P H-2K^d Influenza HA peptide, IYSTVASSL
 TS-M528-P H-2D^b Influenza PA peptide, SLENFRAYV
 TS-M503-P H-2K^d Listeria LLO peptide, GYKDGNEYI
 TS-M506-P H-2K^d RSV peptide, SYIGSINNI
 TS-M507-P H-2K^b MuLV p15E peptide, KSPWFTTL
 TS-M521-P H-2L^d MuLV gp70 peptide, SPSVYVHQF
 TS-M509-P H-2K^b SeV peptide, FAPGNYPAL
 TS-M510-P H-2L^d MCMV IE1 peptide, YPHFMPTNL
 TS-M511-P H-2L^d β-galactosidase peptide, TPHPARIGL
 TS-M512-P H-2D^b LCMV gp33 (C9M) peptide, KAVYNFATM
 TS-M513-P H-2D^b LCMV NP396 peptide, FQPQNGQFI
 TS-M514-P H-2L^d LCMV NP118 peptide, RPQASGVYM
 TS-M515-P H-2K^d malaria Pb9 peptide, SYIPSAEKI
 TS-M516-P H-2D^d HIV P18-I10 peptide, RGPGRAFVTI
 TS-M517-P H-2D^d BCG MPT51 peptide, GGPHAVYLL
 TS-M518-P H-2D^b CEA peptide, EAQNTTYL
 TS-M519-P H-2L^d P815 peptide, LPYLGWLVF
 TS-M522-P H-2L^d HBsAg peptide, IPQSLDSWWTSL
 TS-M523-P H-2K^b HSV-1 gB peptide, SSIEFARL
 TS-M524-P H-2D^b HY Uty peptide, WMHHNMDLI
 TS-M525-P H-2K^d EGFP peptide, HYLSTQSAL
 TS-M526-P H-2K^d HER2 peptide, TYLPTNASL
 TS-M529-P H-2K^b VSV NP peptide, RGVVYQGL
 TS-M530-P H-2D^k polyomavirus MT peptide, RRLGRTLLL
 TS-M531-P H-2D^k HTLV-1 Tax₃₈₋₄₆ peptide, ARLHRHALL
 TS-M008-P H-2K^b SIY peptide, SIYRYVGL
 TS-M701-P I-A^b HbC helper peptide
 TS-M702-P I-A^d Tetanus toxin p30 helper peptide
 TS-M703-P I-A^b/I-A^d OVA helper peptide
 TS-M704-P I-A^b MOG₃₅₋₅₅ peptide
 TS-M707-P I-A^b ESAT-6₁₋₂₀ peptide
 TS-M708-P I-A^k HEL peptide
 TS-M716-P I-A^b Influenza NP₃₁₁₋₃₂₅ peptide
 TS-M721-P I-A^b *L. monocytogenes* LLO₁₉₀₋₂₀₁ peptide
 TS-M722-P I-A^b mouse 2W1S peptide
 TS-M724-P I-A^b LCMV GP₁₂₆₋₁₄₀ peptide

Kits

AM-1005M IMMUNOCYTO Cytotoxicity Detection Kit
 TB-7400-K1 QuickSwitch™ Quant H-2K^b Tetramer Kit-PE
 TB-7401-K1 QuickSwitch™ H-2K^b Tetramer Kit-PE

Others

D341-4 mouse CD4-FITC (GK1.5)
 D271-4 mouse CD8-FITC (KT15)
 D271-5 mouse CD8-PE (KT15)
 D271-A64 mouse CD8-Alexa Fluor® 647 (KT15)
 K0221-3 anti-mouse TCR DO11.10 (KJ1.26)
 K0222-3 anti-mouse TCR 3D7-52.5 (KJ12.98)
 A07704 7-AAD Viability Dye
 MTG-001 Clear Back (Human FcR blocking reagent)

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