

T-Select PEPTIDE

# H-2L<sup>d</sup> MuLV gp70 Peptide

## SPSYVYHQF

Code No.	Quantity	Concentration
TS-M521-P	100 µL	10 mg/mL

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

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

**Origin:** MuLV env gp70 (AH1), 423-431 aa

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

**Molecular Weight:** 1,127 Da

**Purity:** ≥98%

**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-2L<sup>d</sup> (MBL, PN TS-M521-1) for more details.

### H-2L<sup>d</sup> MuLV gp70 Tetramers

TS-M521-1 H-2L<sup>d</sup> MuLV gp70 Tetramer-SPSYVYHQF-PE  
TS-M521-2 H-2L<sup>d</sup> MuLV gp70 Tetramer-SPSYVYHQF-APC

### References for This Epitope

- 1) Huang AYC, *et al. PNAS* **93**: 9730–9735 (1996)
- 2) Luznik L, *et al. Blood* **101**: 1645–1652 (2003)
- 3) Rosato A, *et al. Cancer Res* **63**: 2158–2163 (2003)
- 4) Bronte V, *et al. J Immunol* **171**: 6396–6405 (2003)
- 5) Schirmbeck R, *et al. J Immunol* **177**: 1534–1542 (2006)
- 6) Yoshimura K, *et al. Cancer Res* **66**: 1096–1104 (2006)
- 7) Yoshimura K, *et al. Cancer Res* **67**: 10058–10066 (2007)
- 8) Jordan KR, *et al. J Immunol* **180**: 188–197 (2008)
- 9) Kemmler CB, *et al. J Immunol* **187**: 4431–4439 (2011)
- 10) Buhrman JD, *et al. Cancer Res* **73**: 74–85 (2013)

### Related Products

#### T-Select Peptides

TS-M507-P	H-2K <sup>b</sup> MuLV peptide
TS-M521-P	H-2L <sup>d</sup> MuLV gp70 peptide
TS-5001-P	H-2K <sup>b</sup> OVA peptide
TS-5004-P	H-2K <sup>b</sup> TRP-2 peptide
TS-5008-P	H-2D <sup>b</sup> HPV16 E7 peptide
TS-M501-P	H-2K <sup>b</sup> β-galactosidase peptide
TS-M511-P	H-2L <sup>d</sup> β-galactosidase peptide
TS-M502-P	H-2D <sup>b</sup> Influenza NP peptide
TS-M508-P	H-2D <sup>b</sup> Influenza NP peptide
TS-M527-P	H-2D <sup>b</sup> Influenza NP peptide
TS-M520-P	H-2K <sup>d</sup> Influenza HA peptide
TS-M528-P	H-2D <sup>b</sup> Influenza PA peptide
TS-M503-P	H-2K <sup>d</sup> Listeria LLO peptide
TS-M505-P	H-2D <sup>b</sup> human gp100 peptide
TS-M506-P	H-2K <sup>d</sup> RSV peptide
TS-M509-P	H-2K <sup>b</sup> SeV peptide
TS-M510-P	H-2L <sup>d</sup> MCMV IE1 peptide
TS-5002-P	H-2D <sup>b</sup> LCMV gp33 peptide
TS-M512-P	H-2D <sup>b</sup> LCMV gp33 (C9M) peptide
TS-M513-P	H-2D <sup>b</sup> LCMV NP396 peptide
TS-M514-P	H-2L <sup>d</sup> LCMV NP118 peptide

TS-M515-P H-2K<sup>d</sup> malaria peptide  
TS-M516-P H-2D<sup>d</sup> HIV P18-I10 peptide  
TS-M517-P H-2D<sup>d</sup> BCG MPT51 peptide  
TS-M518-P H-2D<sup>b</sup> CEA peptide  
TS-M519-P H-2L<sup>d</sup> P815 peptide  
TS-M522-P H-2L<sup>d</sup> HBsAg peptide  
TS-M523-P H-2K<sup>b</sup> HSV-1 gB peptide  
TS-M524-P H-2D<sup>b</sup> HY Uty peptide  
TS-M525-P H-2K<sup>d</sup> EGFP peptide  
TS-M526-P H-2K<sup>d</sup> HER2 peptide  
TS-M529-P H-2K<sup>b</sup> VSV NP peptide  
TS-M530-P H-2D<sup>k</sup> polyomavirus MT peptide  
TS-M531-P H-2D<sup>k</sup> HTLV-1 Tax<sub>38-46</sub> peptide  
TS-M701-P I-A<sup>b</sup> HbC helper peptide  
TS-M702-P I-A<sup>d</sup> Tetanus toxin p30 helper peptide  
TS-M703-P I-A<sup>b</sup>/I-A<sup>d</sup> OVA helper peptide  
TS-M704-P I-A<sup>b</sup> MOG<sub>35-55</sub> peptide  
TS-M707-P I-A<sup>b</sup> ESAT-6<sub>1-20</sub> peptide  
TS-M708-P I-A<sup>k</sup> HEL peptide

### T-Select Mouse Tetramers

#### MuLV

TS-M507-1 H-2K<sup>b</sup> MuLV p15E Tetramer-KSPWFITL-PE  
TS-M521-1 H-2L<sup>d</sup> MuLV gp70 Tetramer-SPSYVYHQF-PE

#### Influenza

TS-M502-1 H-2D<sup>b</sup> Influenza NP Tetramer-ASNENMDTM-PE  
TS-M508-1 H-2D<sup>b</sup> Influenza NP Tetramer-ASNENMETM-PE  
TS-M527-1 H-2D<sup>b</sup> Influenza NP Tetramer-ASNENMDAM-PE  
TS-M528-1 H-2D<sup>b</sup> Influenza PA Tetramer-SSLENFRAYV-PE  
TS-M520-1 H-2K<sup>d</sup> Influenza HA Tetramer-IYSTVASSL-PE

#### LCMV

TS-5002-1C H-2D<sup>b</sup> LCMV gp33 Tetramer-KAVYNFATC-PE  
TS-5009-1 H-2D<sup>b</sup> LCMV gp<sub>276-286</sub> Tetramer-SGVENPGGYCL-PE  
TS-5010-1C H-2K<sup>b</sup> LCMV gp<sub>34-41</sub> Tetramer-AVYNFATC-PE  
TS-5011-1 H-2K<sup>b</sup> LCMV gp<sub>34-43</sub> Tetramer-AVYNFATCGI-PE  
TS-5012-1 H-2K<sup>b</sup> LCMV gp<sub>118-125</sub> Tetramer-ISHNFCNL-PE  
TS-5014-1 H-2K<sup>b</sup> LCMV L protein Tetramer-LEYDFNKL-PE  
TS-5015-1 H-2K<sup>b</sup> LCMV NP<sub>205-212</sub> Tetramer-YTVKYPNL-PE  
TS-M512-1 H-2D<sup>b</sup> LCMV gp33 (C9M) Tetramer-KAVYNFATM-PE  
TS-M513-1 H-2D<sup>b</sup> LCMV NP396 Tetramer-FQPQNGQFI-PE  
TS-M514-1 H-2L<sup>d</sup> LCMV NP118 Tetramer-RPQASGVYM-PE

#### HIV

TS-M516-1 H-2D<sup>d</sup> HIV P18-I10 Tetramer-RGPGRAFVTI-PE  
TS-5007-1 H-2K<sup>b</sup> HIV gag Tetramer-AMQMLKETI-PE

#### RSV

TS-M506-1 H-2K<sup>d</sup> RSV Tetramer-SYIGSINNI-PE  
TS-5018-1C H-2D<sup>b</sup> RSV Tetramer-NAITNAKII-PE

#### Other virus

TS-5008-1C H-2D<sup>b</sup> HPV16 E7 Tetramer-RAHYNIVTF-PE  
TS-M509-1 H-2K<sup>b</sup> SeV Tetramer-FAPGNYPAL-PE  
TS-M510-1 H-2L<sup>d</sup> MCMV IE1 Tetramer-YPHFMPTNL-PE  
TS-M522-1 H-2L<sup>d</sup> HBsAg Tetramer-IPQSLDSWWTSL-PE  
TS-M523-1 H-2K<sup>b</sup> HSV-1 gB Tetramer-SSIEFARL-PE  
TS-M529-1 H-2K<sup>b</sup> VSV NP Tetramer-RGYVYQGL-PE

TS-M530-1 H-2D<sup>k</sup> polyomavirus MT Tetramer-RRLGRTLLL-PE  
TS-M531-1 H-2D<sup>k</sup> HTLV-1 Tax<sub>38-46</sub> Tetramer-ARLHRHALL-PE  
TS-5016-1 H-2D<sup>b</sup> MoMSV Tetramer-(Abu)(Abu)L(Abu)LTVFL-PE  
TS-5017-1C H-2D<sup>b</sup> SIV gag Tetramer-AAVKNWMTQTL-PE

#### Cancer

TS-5004-1C H-2K<sup>b</sup> TRP2 Tetramer-SVYDFVWL-PE  
TS-M504-1 H-2D<sup>b</sup> WT1 Tetramer-RMFPNAPYL-PE  
TS-M505-1 H-2D<sup>b</sup> human gp100 Tetramer-KVPRNQDWL-PE  
TS-M518-1 H-2D<sup>b</sup> CEA Tetramer-EAQNTTYL-PE  
TS-M519-1 H-2L<sup>d</sup> P815 Tetramer-LPYLGWLWVF-PE  
TS-M526-1 H-2K<sup>d</sup> HER2 Tetramer-TYLPNTASL-PE

#### OVA

TS-5001-1C H-2K<sup>b</sup> OVA Tetramer-SIINFEKL-PE  
TS-M541-1 H-2K<sup>b</sup> OVA E1 Tetramer-EIINFEKL-PE  
TS-M542-1 H-2K<sup>b</sup> OVA G4 Tetramer-SIIGFEKL-PE  
TS-M543-1 H-2K<sup>b</sup> OVA Q4H7 Tetramer-SIIQFEHL-PE

#### Foreign antigen

TS-M525-1 H-2K<sup>d</sup> EGFP Tetramer-HYLSTQSAL-PE  
TS-M503-1 H-2K<sup>d</sup> Listeria LLO Tetramer-GYKDGNEYI-PE  
TS-M515-1 H-2K<sup>d</sup> malaria Tetramer-SYIPSAEKI-PE  
TS-M517-1 H-2D<sup>d</sup> BCG MPT51 Tetramer-GGPHAVYLL-PE  
TS-M501-1 H-2K<sup>b</sup>  $\beta$ -galactosidase Tetramer-DAPIYTNV-PE  
TS-M511-1 H-2L<sup>d</sup>  $\beta$ -galactosidase Tetramer-TPHPARIGL-PE

#### Mouse class II Tetramers

TS-M704-1 I-A<sup>b</sup> MOG<sub>35-55</sub> Tetramer-PE  
TS-M705-1 I-A<sup>b</sup> FMLV<sub>123-141</sub> Tetramer-PE  
TS-M706-1 I-A<sup>b</sup> E $\alpha$ <sub>52-68</sub> Tetramer-PE  
TS-M707-1 I-A<sup>b</sup> ESAT-6<sub>1-20</sub> Tetramer-PE  
TS-M710-1 I-A<sup>b</sup> OVA<sub>323-339</sub> Tetramer-PE

#### Others

TS-M524-1 H-2D<sup>b</sup> HY Uty Tetramer-WMHHNMDLI-PE  
TS-MCD-1 Mouse CD1d Tetramer-PE

#### Kit

AM-1005 IMMUNOCYTO Cytotoxicity Detection Kit

#### Others

D341-4 mouse CD4-FITC (GK1.5)  
D271-4 mouse CD8-FITC (KT15)  
D271-A64 mouse CD8-Alexa Fluor<sup>®</sup> 647 (KT15)  
K0221-3 anti-mouse TCR DO11.10 (KJ1.26)  
K0221-5 anti-mouse TCR DO11.10-PE (KJ1.26)  
K0222-3 anti-mouse TCR 3DT-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.