

T-Select PEPTIDE

# H-2K<sup>b</sup> SIY Peptide

# SIYRYYGL

Code No.	Quantity	Concentration
TS-M008-P	100 µL	10 mg/mL

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

**Peptide Sequence:** SIYRYYGL (8 aa)

**Origin:** Designed peptide

**MHC Restriction:** H-2K<sup>b</sup>

**Molecular Weight:** 1,034 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.

### H-2K<sup>b</sup> Negative (SIY) Tetramers

TS-M008-1 H-2K<sup>b</sup> Negative (SIY) Tetramer-SIYRYYGL-PE  
TS-M008-2 H-2K<sup>b</sup> Negative (SIY) Tetramer-SIYRYYGL-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	C3H/He, AKR/J

### References for this epitope

- 1) Udaka K, *et al. Immunology* **157**: 670-678 (1996)
- 2) Chamoto K, *et al. Cancer Res* **66**: 1809-1817 (2006)
- 3) Wakita D, *et al. Int Immunol* **18**: 425-434 (2006)
- 4) Fujimura T, *et al. Eur J Immunol* **36**: 3371-3380 (2006)
- 5) Asano J, *et al. J Immunol* **184**: 736-745 (2010)

### Related Products

#### T-Select Peptides

TS-5001-P	H-2K <sup>b</sup> OVA peptide
TS-5002-P	H-2D <sup>b</sup> LCMV gp33 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-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-M534-P	H-2K <sup>d</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-M507-P	H-2K <sup>b</sup> MuLV p15E peptide
TS-M521-P	H-2L <sup>d</sup> MuLV gp70 peptide
TS-M509-P	H-2K <sup>b</sup> SeV peptide
TS-M510-P	H-2L <sup>d</sup> MCMV IE1 peptide
TS-M511-P	H-2L <sup>d</sup> β-galactosidase 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-M008-P H-2K<sup>b</sup> SIY 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**

#### **Cancer**

TS-5004-1C H-2K<sup>b</sup> TRP2 Tetramer-SVYDFVWL-PE  
 TS-M504-1 H-2D<sup>b</sup> WT1<sub>126-134</sub> 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-LPYLGWLVF-PE  
 TS-M526-1 H-2K<sup>d</sup> HER2 Tetramer-TYLPTNASL-PE  
 TS-M544-1 H-2K<sup>d</sup> JAK1 Tetramer-SYFPEITHI-PE  
 TS-M545-1 H-2K<sup>d</sup> Erk2 K136Q Tetramer-QYIHSANVL-PE  
 TS-M546-1 H-2D<sup>b</sup> gp100 Tetramer-EGSRNQDWL-PE  
 TS-M558-1 H-2K<sup>b</sup> MAGE-AX<sub>169-176</sub> Tetramer-LGITYDGM-PE  
 TS-M559-1 H-2K<sup>b</sup> MAGE-A5 Tetramer-HNTQYCNI-PE  
 TS-M561-1 H-2D<sup>b</sup> hPSA Tetramer-HCIRNKSVIL-PE  
 TS-M562-1 H-2K<sup>b</sup> mTERT Tetramer-VGRNFTNL-PE  
 TS-M563-1 H-2K<sup>b</sup> pBM1 Tetramer-INFDFNTI-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-SLENFRAYV-PE  
 TS-M533-1 H-2K<sup>b</sup> Influenza PB1 Tetramer-SSYRRPVGI-PE  
 TS-M566-1 H-2K<sup>b</sup> Influenza NS2 Tetramer-RTFSFQLI-PE  
 TS-M520-1 H-2K<sup>d</sup> Influenza HA Tetramer-IYSTVASSL-PE  
 TS-M535-1 H-2K<sup>d</sup> Influenza HA Tetramer-LYQNVGTYV-PE  
 TS-M534-1 H-2K<sup>d</sup> Influenza NP Tetramer-TYQRTRALV-PE

#### **LCMV**

TS-5002-1C H-2D<sup>b</sup> LCMV gp<sub>33</sub> Tetramer-KAVYNFATC-PE  
 TS-M512-1 H-2D<sup>b</sup> LCMV gp<sub>33</sub> (C9M) Tetramer-KAVYNFATM-PE  
 TS-5009-1 H-2D<sup>b</sup> LCMV gp<sub>276-286</sub> Tetramer-SGVENPGGYCL-PE  
 TS-M513-1 H-2D<sup>b</sup> LCMV NP<sub>396</sub> Tetramer-FQPQNGQFI-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-M514-1 H-2L<sup>d</sup> LCMV NP<sub>118</sub> Tetramer-RPQASGVYM-PE

### **Virus**

TS-5007-1 H-2K<sup>b</sup> HIV gag Tetramer-AMQMLKETI-PE  
 TS-M516-1 H-2D<sup>d</sup> HIV P18-I10 Tetramer-RGPGRAFVTI-PE  
 TS-M536-1 H-2D<sup>d</sup> HIV env Tetramer-IGPGRAFYA-PE  
 TS-5018-1C H-2D<sup>b</sup> RSV Tetramer-NAITNAKII-PE  
 TS-M506-1 H-2K<sup>d</sup> RSV Tetramer-SYIGSINNI-PE  
 TS-M567-1 H-2K<sup>d</sup> RSV M2 Tetramer-SYIGSINNI-PE  
 TS-M555-1 H-2K<sup>d</sup> RSV F glycoprotein Tetramer-KYKNAVTEL-PE  
 TS-M539-1 H-2D<sup>b</sup> SV40 large T Ag<sub>206-215</sub> Tetramer-SAINNYAQL-PE  
 TS-M540-1 H-2D<sup>b</sup> SV40 large T Ag<sub>469-497</sub> Tetramer-QGINLNDNL-PE  
 TS-M507-1 H-2K<sup>b</sup> MuLV p15E Tetramer-KSPWFRTL-PE  
 TS-M521-1 H-2L<sup>d</sup> MuLV gp70 Tetramer-SPSYVYHQF-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-M532-1 H-2D<sup>b</sup> HCV NS3<sub>1629-1637</sub> Tetramer-GAVQNEVTL-PE  
 TS-M537-1 H-2K<sup>b</sup> HBV core Tetramer-MGLKFRQL-PE  
 TS-M538-1 H-2K<sup>b</sup> VACV B8R Tetramer-TSYKFESV-PE  
 TS-5008-1C H-2D<sup>b</sup> HPV16 E7 Tetramer-RAHYNIVTF-PE  
 TS-5016-1 H-2D<sup>b</sup> MoMSV Tetramer-(Abu)X(Abu)L(Abu)LTVFL-PE  
 TS-5017-1C H-2D<sup>b</sup> SIV gag Tetramer-AAVKNWMTQTL-PE  
 TS-M564-1 H-2D<sup>b</sup> AdV5 E1A Tetramer-SGPSNTPPEI-PE  
 TS-M568-1 H-2K<sup>d</sup> MHV M2 Tetramer-GFNKLRSTL-PE

### **Foreign antigen**

TS-5001-1C H-2K<sup>b</sup> OVA Tetramer-SIINFEKL-PE  
 TS-M008-1 H-2K<sup>b</sup> Negative (SIY) Tetramer-SIYRYYGL-PE  
 TS-M525-1 H-2K<sup>d</sup> EGFP Tetramer-HYLSTQSAL-PE  
 TS-M501-1 H-2K<sup>b</sup> β-galactosidase Tetramer-DAPIYTNV-PE  
 TS-M511-1 H-2L<sup>d</sup> β-galactosidase Tetramer-TPHPARIQL-PE

### **MHC Class II Tetramers**

TS-M704-1 I-A<sup>b</sup> MOG<sub>35-55</sub> Tetramer-PE  
 TS-M710-1 I-A<sup>b</sup> OVA<sub>323-339</sub> Tetramer-PE

### **CD1d Tetramers**

TS-MCD-1 Mouse CD1d Tetramer-PE

### **Kit**

AM-1005M IMMUNOCYTO Cytotoxicity Detection Kit

### **Others**

D341-4 mouse CD4-FITC (GK1.5)  
 D271-4 mouse CD8-FITC (KT15)  
 K0221-5 anti-mouse TCR DO11.10-PE (KJ1.26)  
 K0222-3 anti-mouse TCR 3D7-52.5 (KJ12.98)  
 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.