

T-Select PEPTIDE

# I-A<sup>b</sup> MOG<sub>35-55</sub> Peptide

# MEVGWYRSPFSRVVHLYRNGK

Code No.	Quantity	Concentration
TS-M704-P	100 µL	10 mg/mL

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

### Peptide Sequence

MEVGWYRSPFSRVVHLYRNGK (21 aa)

### Origin

Myelin oligodendritic glycoprotein (MOG), 35-55 aa

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

**Molecular Weight:** 2,582 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<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-M704-1) for more details.

### I-A<sup>b</sup> MOG<sub>35-55</sub> Tetramer

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

### Mouse I-A Allele

MHC class II	I-A <sup>b</sup>	I-A <sup>d</sup>	I-A <sup>k</sup>	I-A <sup>s</sup>
Mouse strains	C57BL/-, BXSB/Mp, 129/-	BALB/c, DBA/2, B10D2	C3H/He	SJL/J B10.S

### References for MOG<sub>35-55</sub>

- 1) Mendel I, *et al. Eur J Immunol* **25**: 1951-1959 (1995)
- 2) Bettelli E, *et al. J Exp Med* **197**: 1073-1081 (2003)
- 3) Ford ML and Evavold BD, *Eur J Immunol* **35**: 76-85 (2005)
- 4) Korn T, *et al. Nat Med* **13**: 423-431 (2007)
- 5) Chung DT, *et al. Int Immunol* **19**: 1003-1010 (2007)
- 6) Sabatino JJ, Jr, *et al. J Immunol* **180**: 4451-4457 (2008)
- 7) Xiao S, *et al. J Immunol* **181**: 2277-2284 (2008)
- 8) Wasserman HA, *et al. J Immunol* **181**: 6843-6849 (2008)
- 9) Elyaman W, *et al. Am J Pathol* **173**: 411-422 (2008)
- 10) Korn T, *et al. PNAS* **105**: 18460-18465 (2008)

### Related Products

#### Helper Peptides

- TS-M704-P I-A<sup>b</sup> MOG 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-M707-P I-A<sup>b</sup> ESAT-6 peptide
- TS-M708-P I-A<sup>k</sup> HEL peptide

#### Mouse 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
- TS-M710-2 I-A<sup>b</sup> OVA<sub>323-339</sub> Tetramer-APC
- 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

### **T-Select Peptides**

TS-M501-P H-2K<sup>b</sup>  $\beta$ -galactosidase peptide  
 TS-M511-P H-2L<sup>d</sup>  $\beta$ -galactosidase peptide  
 TS-M502-P H-2D<sup>b</sup> Influenza NP 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 peptide  
 TS-M508-P H-2D<sup>b</sup> Influenza NP 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-M520-P H-2K<sup>d</sup> Influenza HA peptide  
 TS-M521-P H-2L<sup>d</sup> MuLV gp70 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-M527-P H-2D<sup>b</sup> Influenza NP peptide  
 TS-M528-P H-2D<sup>b</sup> Influenza PA 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

### **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 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

#### **Virus**

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  
 TS-5002-1C H-2D<sup>b</sup> LCMV gp33 Tetramer-KAVYNFATC-PE  
 TS-M512-1 H-2D<sup>b</sup> LCMV gp33 (C9M) Tetramer-KAVYNFATM-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-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  
 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  
 TS-5008-1C H-2D<sup>b</sup> HPV16 E7 Tetramer-RAHYNIVTF-PE  
 TS-M506-1 H-2K<sup>d</sup> RSV Tetramer-SYIGSINNI-PE  
 TS-5018-1C H-2D<sup>b</sup> RSV Tetramer-NAITNAKII-PE  
 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  
 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

### **Foreign antigen**

TS-5001-1C H-2K<sup>b</sup> OVA Tetramer-SIINFEKL-PE  
 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

### **Others**

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

### **Kit**

AM-1005 IMMUNOCYTO Cytotoxicity Detection Kit

### **Others**

D341-4 Anti-mouse CD4-FITC (GK1.5)  
 D271-4 Anti-mouse CD8-FITC (KT15)  
 D271-A64 Anti-mouse CD8-Alexa Fluor<sup>®</sup> 647 (KT15)  
 732121 Anti-mouse CD16/32 (93)  
 732151 Anti-mouse CD45-APC (I3/2.3)  
 732152 Anti-mouse CD45-SPRD (I3/2.3)  
 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.