

T-Select PEPTIDE

H-2D^b LCMV gp33 (C9M)

Peptide KAVYNFATM

Code No.	Quantity	Concentration
TS-M512-P	100 µL	10 mg/mL

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

Peptide Sequence: KAVYNFATM (9 aa)

Origin: Lymphocytic choriomeningitis virus (LCMV) glycoprotein, 33-41 aa (C9M)

MHC Restriction: H-2D^b

Molecular Weight: 1,044 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⁺ 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-2D^b (MBL, PN TS-M512-1) for more details.

H-2D^b LCMV gp33 Tetramers

TS-M512-1	H-2D ^b LCMV gp33 (C9M) Tetramer-KAVYNFATM-PE
TS-M512-2	H-2D ^b LCMV gp33 (C9M) Tetramer-KAVYNFATM-APC
TS-5002-1C	H-2D ^b LCMV gp33 Tetramer-KAVYNFATC-PE
TS-5002-2C	H-2D ^b LCMV gp33 Tetramer-KAVYNFATC-APC
TB-5002-4	H-2D ^b LCMV gp33 Tetramer-KAVYNFATC-BV421

Mouse Strain H-2D Haplotypes

H-2D allele	H-2D ^b	H-2D ^d	H-2D ^k
Mouse strains	C57BL/-, BXSB/Mp, 129/-,NOD	BALB/c, DBA/2, B10.D2	C3H/He, AKR/J, CBA/-

References for This Epitope

- 1) Pircher H, *et al. Nature* **342**: 559-561 (1989)
- 2) Moskophidis D, Zinkernagel RM, *J Virol* **69**: 2187-2193 (1995)
- 3) Gairin JE, *et al. J Virol* **69**: 2297-2305 (1995)
- 4) Zajac AJ, *et al. J Exp Med* **188**: 2205-2213 (1998)
- 5) Wang Bo, *et al. J Immunol* **169**: 3137-3145 (2002)
- 6) Blohm U, *et al. J Immunol* **169**: 5522-5530 (2002)
- 7) Brehm MA, *et al. J Immunol* **170**: 4077-4086 (2003)
- 8) Kerry SE, *et al. J Immunol* **171**: 4493-4503 (2003)
- 9) Probst HC, *et al. J Immunol* **171**: 5415-5422 (2003)
- 10) Zhou S, *et al. J Virol* **78**: 3578-3600 (2004)
- 11) Sandalova T, *et al. J Biol Chem* **280**: 27069-27075 (2005)
- 12) Masopust D, *et al. J Virol* **81**: 2002-2011 (2007)
- 13) Ohyagi H, *et al. Immunity* **39**: 584-598 (2013)
- 14) Leong YA, *et al. Nat Immunol* **17**: 1187-1196 (2016)

Related Products

T-Select PEPTIDES

TS-5001-P	H-2K ^b	OVA peptide, SIINFEKL
TS-5002-P	H-2D ^b	LCMV gp33 peptide, KAVYNFATC
TS-5004-P	H-2K ^b	TRP-2 peptide, SVYDFVWL
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, SSLENFRAYV
TS-M503-P	H-2K ^d	Listeria LLO peptide, GYKDGNEYI
TS-M505-P	H-2D ^b	human gp100 peptide, KVPRNQDWL
TS-M506-P	H-2K ^d	RSV peptide, SYIGSINNI
TS-M507-P	H-2K ^b	MuLV p15E peptide, KSPWF TTL
TS-M521-P	H-2L ^d	MuLV gp70 peptide, SPSYVYHQF
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, RGPGRFV TI
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, RGYVYQGL
TS-M530-P	H-2D ^k	polyomavirus MT peptide, RRLGRTLLL
TS-M531-P	H-2D ^k	HTLV-1 Tax ₃₈₋₄₆ peptide, ARLHRHALL
TS-M008-P	H-2K ^b	SIY peptide, SIYRYYGL
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	MOG ₃₅₋₅₅ peptide
TS-M707-P	I-A ^b	ESAT-6 ₁₋₂₀ peptide
TS-M708-P	I-A ^k	HEL peptide
TS-M716-P	I-A ^b	Influenza NP ₃₁₁₋₃₂₅ peptide
TS-M721-P	I-A ^b	<i>L. monocytogenes</i> LLO ₁₉₀₋₂₀₁ peptide
TS-M722-P	I-A ^b	mouse 2W1S peptide
TS-M724-P	I-A ^b	LCMV GP ₁₂₆₋₁₄₀ peptide

T-Select Mouse Tetramers

LCMV

TS-5002-1C	H-2D ^b	LCMV gp ₃₃ Tetramer-KAVYNFATC-PE
TS-M512-1	H-2D ^b	LCMV gp ₃₃ (C9M) Tetramer-KAVYNFATM-PE
TB-5009-1	H-2D ^b	LCMV gp ₂₇₆₋₂₈₆ Tetramer-SGVENPGGYCL-PE
TS-M513-1	H-2D ^b	LCMV NP ₃₉₆ Tetramer-FQPQNGQFI-PE
TS-5010-1C	H-2K ^b	LCMV gp ₃₄₋₄₁ Tetramer-AVYNFATC-PE
TB-5011-1	H-2K ^b	LCMV gp ₃₄₋₄₃ Tetramer-AVYNFATCGI-PE
TB-5012-1	H-2K ^b	LCMV gp ₁₁₈₋₁₂₅ Tetramer-ISHNFCNL-PE
TB-5014-1	H-2K ^b	LCMV L protein Tetramer-LEYDFNKL-PE
TB-5015-1	H-2K ^b	LCMV NP ₂₀₅₋₂₁₂ Tetramer-YTVKYPNL-PE
TS-M514-1	H-2L ^d	LCMV NP ₁₁₈ Tetramer-RPQASGVYM-PE

Influenza

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-SSLENFRAYV-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-LYQNVGTYV-PE
TB-M534-1	H-2K ^d	Influenza NP Tetramer-TYQRTRALV-PE

Virus

TS-M522-1	H-2L ^d	HBsAg Tetramer-IPQSLDSWWTSL-PE
TB-5110-1	H-2K ^b	HBV HBsAg Tetramer-VWLSVIWM-PE
TS-M537-1	H-2K ^b	HBV core Tetramer-MGLKFRQL-PE
TB-5007-1	H-2K ^b	HIV gag Tetramer-AMQMLKETI-PE
TS-M516-1	H-2D ^d	HIV P18-I10 Tetramer-RGPGRFV TI-PE
TB-M536-1	H-2D ^d	HIV env Tetramer-IGPGRFYA-PE
TS-5018-1C	H-2D ^b	RSV Tetramer-NAITNAKII-PE
TS-M506-1	H-2K ^d	RSV Tetramer-SYIGSINNI-PE
TS-M567-1	H-2K ^d	RSV M2 Tetramer-SYIGINNI-PE
TS-M555-1	H-2K ^d	RSV F glycoprotein Tetramer-KYKNAVTEL-PE
TB-M539-1	H-2D ^b	SV40 large T Ag ₂₀₆₋₂₁₅ Tetramer-SAINNYAQL-PE
TS-M540-1	H-2D ^b	SV40 large T Ag ₄₈₉₋₄₉₇ Tetramer-QGINNLDNL-PE
TS-M507-1	H-2K ^b	MuLV p15E Tetramer-KSPWF TTL-PE
TS-M521-1	H-2L ^d	MuLV gp70 Tetramer-SPSYVYHQF-PE
TS-M510-1	H-2L ^d	MCMV IE1 Tetramer-YPHFMPTNL-PE
TB-5109-1	H-2D ^b	MCMV M45 Tetramer-HGIRNASFI-PE
TB-5111-1	H-2D ^d	MCMV M164 Tetramer-AGPPRYRI-PE
TS-M509-1	H-2K ^b	SeV Tetramer-FAPGNYPAL-PE
TS-M523-1	H-2K ^b	HSV-1 gB Tetramer-SSIEFARL-PE
TS-M529-1	H-2K ^b	VSV NP Tetramer-RGYVYQGL-PE
TS-M530-1	H-2D ^k	polyomavirus MT Tetramer-RRLGRTLLL-PE
TS-M531-1	H-2D ^k	HTLV-1 Tax ₃₈₋₄₆ Tetramer-ARLHRHALL-PE
TS-M532-1	H-2D ^b	HCV NS3 ₁₆₂₉₋₁₆₃₇ Tetramer-GAVQNEVTL-PE
TB-M538-1	H-2K ^b	VACV B8R Tetramer-TSYKFESV-PE
TB-5008-1	H-2D ^b	HPV16 E7 Tetramer-RAHYNIVTF-PE
TB-5016-1	H-2D ^b	MoMSV Tetramer-(Abu)(Abu)L(Abu)LTVFL-PE
TB-5017-1	H-2D ^b	SIV gag Tetramer-AAVKNWMTQTL-PE
TS-M564-1	H-2D ^b	Adv5 E1A Tetramer-SGPSNTPPEI-PE
TS-M568-1	H-2K ^d	MHV M2 Tetramer-GFNKLRSTL-PE
TB-5101-1	H-2D ^b	MHV S protein Tetramer-CSLWNGPHL-PE

MHC Class II Tetramers

TS-M703-1	I-A ^d	OVA ₃₂₃₋₃₃₉ Tetramer-PE
TS-M704-1	I-A ^b	MOG ₃₅₋₅₅ Tetramer-PE
TS-M705-1	I-A ^b	FMLV ₁₂₃₋₁₄₁ Tetramer-PE
TS-M706-1	I-A ^b	Eα ₅₂₋₆₈ Tetramer-PE
TS-M707-1	I-A ^b	ESAT-6 ₁₋₂₀ Tetramer-PE
TS-M710-1	I-A ^b	OVA ₃₂₃₋₃₃₉ Tetramer-PE
TS-M715-1	I-A ^b	human CLIP ₁₀₃₋₁₁₇ Tetramer-PE
TS-M716-1	I-A ^b	Influenza A NP ₃₁₁₋₃₂₅ Tetramer-PE
TS-M720-1	I-A ^d	human CLIP ₁₀₃₋₁₁₇ Tetramer-PE
TS-M721-1	I-A ^b	<i>L. monocytogenes</i> LLO ₁₉₀₋₂₀₁ Tetramer-PE
TS-M722-1	I-A ^b	mouse 2W1S Tetramer-PE
TS-M724-1	I-A ^b	LCMV GP ₁₂₆₋₁₄₀ Tetramer-PE

Others

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
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 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.