

T-Select PEPTIDE

H-2D^b human gp100

Peptide

KVPRNQDWL

Code No.
TS-M505-P

Quantity
100 µL

Concentration
10 mg/mL

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

Peptide Sequence: KVPRNQDWL (9 aa)

Origin: human gp100, 25-33 aa

MHC Restriction: H-2D^b

Molecular Weight: 1,155 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.

H-2D^b human gp100 Tetramers

TS-M505-1 H-2D^b human gp100 Tetramer-KVPRNQDWL-PE
TS-M505-2 H-2D^b human gp100 Tetramer-KVPRNQDWL-APC
TB-M505-4 H-2D^b human gp100 Tetramer-KVPRNQDWL-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	C3H/He, AKR/J, CBA/-

References for this epitope

- 1) Gold JS, *et al. J Immunol* **170**: 5188–5194 (2003)
- 2) Wang LX, *et al. Cancer Res* **65**: 10569–10577 (2005)
- 3) Cohen AD, *et al. Cancer Res* **66**: 4904–4912 (2006)
- 4) Fujita M, *et al. J Immunol* **180**: 2089–2098 (2008)
- 5) Rizzuto GA, *et al. J Exp Med* **206**: 849–866 (2009)
- 6) Takada K, *et al. Nat Immunol* **16**: 1069–1076 (2015)

Related Products

T-Select PEPTIDES

TS-5001-P	H-2K ^b OVA peptide
TS-5002-P	H-2D ^b LCMV gp33 peptide
TS-5004-P	H-2K ^b TRP-2 peptide
TS-5008-P	H-2D ^b HPV16 E7 peptide
TS-M501-P	H-2K ^b β-galactosidase peptide
TS-M502-P	H-2D ^b Influenza NP peptide
TS-M508-P	H-2D ^b Influenza NP peptide
TS-M527-P	H-2D ^b Influenza NP peptide
TS-M534-P	H-2K ^d Influenza NP peptide
TS-M520-P	H-2K ^d Influenza HA peptide
TS-M528-P	H-2D ^b Influenza PA peptide
TS-M503-P	H-2K ^d Listeria LLO peptide
TS-M505-P	H-2D ^b human gp100 peptide
TS-M506-P	H-2K ^d RSV peptide
TS-M507-P	H-2K ^b MuLV p15E peptide
TS-M521-P	H-2L ^d MuLV gp70 peptide
TS-M509-P	H-2K ^b SeV peptide
TS-M510-P	H-2L ^d MCMV IE1 peptide
TS-M511-P	H-2L ^d β-galactosidase peptide
TS-M512-P	H-2D ^b LCMV gp33 (C9M) peptide
TS-M513-P	H-2D ^b LCMV NP396 peptide

TS-M514-P H-2L^d LCMV NP118 peptide
 TS-M515-P H-2K^d malaria peptide
 TS-M516-P H-2D^d HIV P18-I10 peptide
 TS-M517-P H-2D^d BCG MPT51 peptide
 TS-M518-P H-2D^b CEA peptide
 TS-M519-P H-2L^d P815 peptide
 TS-M522-P H-2L^d HBsAg peptide
 TS-M523-P H-2K^b HSV-1 gB peptide
 TS-M524-P H-2D^b HY Uty peptide
 TS-M525-P H-2K^d EGFP peptide
 TS-M526-P H-2K^d HER2 peptide
 TS-M529-P H-2K^b VSV NP peptide
 TS-M530-P H-2D^k polyomavirus MT peptide
 TS-M531-P H-2D^k HTLV-1 Tax₃₈₋₄₆ peptide
 TS-M008-P H-2K^b SIY peptide
 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

T-Select Mouse Tetramers

Cancer

TS-5004-1C H-2K^b TRP2 Tetramer-SVYDFFVWL-PE
 TS-M504-1 H-2D^b WT1₁₂₆₋₁₃₄ Tetramer-RMFPNAPYL-PE
 TS-M505-1 H-2D^b human gp100 Tetramer-KVPRNQDWL-PE
 TS-M518-1 H-2D^b CEA Tetramer-EAQNTTYL-PE
 TS-M519-1 H-2L^d P815 Tetramer-LPYLGWLVF-PE
 TS-M526-1 H-2K^d HER2 Tetramer-TYLPTNASL-PE
 TS-M544-1 H-2K^d JAK1 Tetramer-SYFPEITHI-PE
 TS-M545-1 H-2K^d Erk2 K136Q Tetramer-QYIHSANVL-PE
 TS-M546-1 H-2D^b gp100 Tetramer-EGSRNQDWL-PE
 TS-M558-1 H-2K^b MAGe-AX₁₆₉₋₁₇₆ Tetramer-LGITYDGM-PE
 TS-M559-1 H-2K^b MAGe-A5 Tetramer-HNTQYCNL-PE
 TS-M561-1 H-2D^b hPSA Tetramer-HCIRNKSVIL-PE
 TS-M562-1 H-2K^b mTERT Tetramer-VGRNFTNL-PE
 TS-M563-1 H-2K^b pBM1 Tetramer-INFDFNTI-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

LCMV

TS-5002-1C H-2D^b LCMV gp₃₃ Tetramer-KAVYNFATC-PE
 TS-M512-1 H-2D^b LCMV gp₃₃ (C9M) Tetramer-KAVYNFATM-PE
 TS-5009-1 H-2D^b LCMV gp₂₇₆₋₂₈₆ Tetramer-SGVENPGGYCL-PE
 TS-M513-1 H-2D^b LCMV NP₃₉₆ Tetramer-FQPQNGQFI-PE

Virus

TS-5007-1 H-2K^b HIV gag Tetramer-AMQMLKETI-PE
 TS-5018-1C H-2D^b RSV Tetramer-NAITNAKII-PE
 TS-M539-1 H-2D^b SV40 large T Ag₂₀₆₋₂₁₅ Tetramer-SAINNYAQKL-PE
 TS-M540-1 H-2D^b SV40 large T Ag₄₈₉₋₄₉₇ Tetramer-QGINLNDNL-PE
 TS-M507-1 H-2K^b MuLV p15E Tetramer-KSPWFHTL-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-M532-1 H-2D^b HCV NS3₁₆₂₉₋₁₆₃₇ Tetramer-GAVQNEVTL-PE
 TS-M537-1 H-2K^b HBV core Tetramer-MGLKFRQL-PE
 TS-M538-1 H-2K^b VACV B8R Tetramer-TSYKFESV-PE
 TS-5008-1C H-2D^b HPV16 E7 Tetramer-RAHYNIIVTF-PE
 TS-5016-1 H-2D^b MoMSV Tetramer-(Abu)(Abu)L(Abu)LTVFL-PE
 TS-5017-1C H-2D^b SIV gag Tetramer-AAVKNWMTQTL-PE
 TS-M564-1 H-2D^b AdV5 E1A Tetramer-SGPSNTPPEI-PE

Foreign antigen

TS-5001-1C H-2K^b OVA Tetramer-SIINFEKL-PE
 TS-M008-1 H-2K^b Negative (SIY) Tetramer-SIYRYVGL-PE
 TS-M525-1 H-2K^d EGFP Tetramer-HYLSTQSAL-PE
 TS-M501-1 H-2K^b β-galactosidase Tetramer-DAPIYTNV-PE
 TS-M511-1 H-2L^d β-galactosidase Tetramer-TPHPARIGL-PE

Bacteria

TS-M503-1 H-2K^d Listeria LLO Tetramer-GYKDGNEYI-PE
 TS-M515-1 H-2K^d malaria Tetramer-SYIPSAEKI-PE
 TS-M547-1 H-2K^d Plasmodium CSP Tetramer-SYVPSAEQI-PE
 TS-M548-1 H-2D^b Chlamydia CrpA Tetramer-ASFVNPIYL-PE
 TS-M560-1 H-2K^b TSKB20 Tetramer-ANYKFTLV-PE
 TS-M517-1 H-2D^d BCG MPT51 Tetramer-GGPHAVYLL-PE
 TS-M549-1 H-2D^b Mtb32a Tetramer-GAPINSATAM-PE
 TS-M550-1 H-2K^b TB10.4 Tetramer-IMYNYPAM-PE

Others

TS-M524-1 H-2D^b HY Uty Tetramer-WMHHNMDLI-PE
 TS-M551-1 H-2K^b HA-60 Tetramer-LTFNYRNL-PE
 TS-M552-1 H-2K^d IGRP Tetramer-VYLKTNVFL-PE
 TS-M553-1 H-2K^d NRP-V7 Tetramer-KYNKANVFL-PE
 TS-M554-1 H-2K^d InsB Tetramer-LYLVCGERL-PE
 TS-M557-1 H-2D^b MimA2 Tetramer-YAIENYLEL-PE

MHC Class II Tetramers

TS-M704-1 I-A^b MOG₃₅₋₅₅ Tetramer-PE
 TS-M705-1 I-A^b FMLV₁₂₃₋₁₄₁ Tetramer-PE
 TS-M706-1 I-A^b Eα₅₂₋₆₈ Tetramer-PE
 TS-M707-1 I-A^b ESAT-6₁₋₂₀ Tetramer-PE
 TS-M710-1 I-A^b OVA₃₂₃₋₃₃₉ 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.