

T-Select PEPTIDE

I-A^b ESAT-6₁₋₂₀ Peptide

MTEQQWNFAGIEAAASAIQG

Code No.	Quantity	Concentration
TS-M707-P	100 µL	10 mg/mL

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

Peptide Sequence

MTEQQWNFAGIEAAASAIQG (20 aa)

Origin: *Mycobacterium tuberculosis* Early Secreted Antigenic Target 6 (ESAT-6), 1-20 aa

MHC Restriction: I-A^b

Molecular Weight: 2,123.32 Da

Purity: ≥90%

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 I-A^b (MBL, PN TS-M707-1) for more details.

I-A^b ESAT-6₁₋₂₀ Tetramer

TS-M707-1 I-A^b ESAT-6₁₋₂₀ Tetramer-PE

Mouse Strain I-A Haplotypes

MHC class II	I-A ^b	I-A ^d	I-A ^k	I-A ^s	I-A ^{g7}
Mouse strains	C57BL/ BXSB/Mp 129/-	BALB/c DBA/2 B10.D2	C3H/He	SJL/J B10.S	NOD

References for ESAT-6₁₋₂₀

- 1) Brandt L, *et al. J Immunol* **157**: 3527-3533 (1996)
- 2) Winslow GM, *et al. J Immunol* **170**: 2046-2052 (2003)
- 3) Jung Y, *et al. J Exp Med* **201**: 1915-1924 (2005)
- 4) Scott-Browne JP, *et al. J Exp Med* **204**: 2159-2169 (2007)
- 5) Khader SA, *et al. Nat Immunol* **8**: 369-377 (2007)
- 6) Ganguly N, *et al. Tuberculosis* **88**: 510-517 (2008)
- 7) Reiley WW, *et al. PNAS* **105**: 10961-10966 (2008)
- 8) Gallegos A, *et al. J Exp Med* **205**: 2359-2368 (2008)
- 9) Liao T-YA, *et al. PLoS ONE* **10**: e0145833 (2015)

Related Products

Please check our web site (<https://ruo.mbl.co.jp>) for up-to-date information on products and custom MHC Tetramers.

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