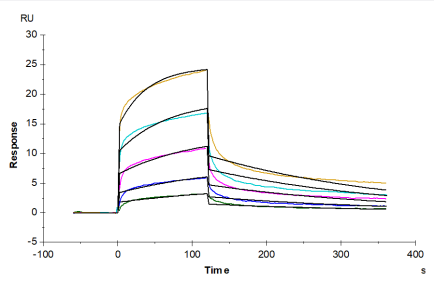
Bioactive CellTx™ HuPro®

HLA-E/B2M/VMAPRTLVL (Human) Recombinant Protein

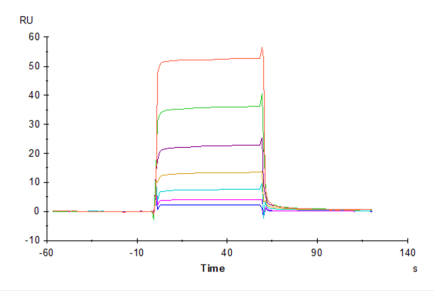
Catalog # P10047 Size 100 ug

Applications



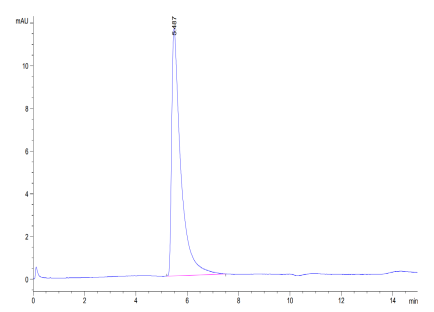
Surface Plasmon Resonance

Human NKG2A&CD94, mFc Tag captured on CM5 Chip via anti-mouse antibody can bind Human HLA-E*01:03&B2M&Peptide (VMAPRTLVL) Tetramer, His Tag with an affinity constant of 17.61 nM as determined in SPR assay (Biacore T200) (QC Test).



Surface Plasmon Resonance

Human NKG2C&CD94, His Tag immobilized on CM5 Chip can bind Human HLA-E*01:03&B2M&Peptide (VMAPRTLVL) Tetramer, His Tag with an affinity constant of 1.65 uM as determined in SPR assay (Biacore T200).



SEC-HPLC

The purity of Human HLA-E*01:03&B2M&Peptide (VMAPRTLVL) Tetramer is greater than 95% as determined by SEC-HPLC.

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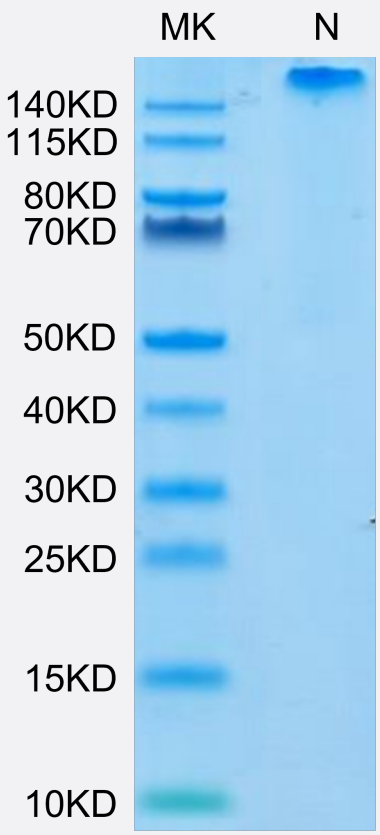

Tris-Bis PAGE

Human HLA-E*01:03&B2M&Peptide (VMAPRTLVL) Tetramer on Tris-Bis PAGE under Non reducing (N) condition. The purity is greater than 95%.

Specification

Product Description	Human HLA-E/B2M/VMAPRTLVL (P13747/P61769/VMAPRTLVL, Gly25-Ile305/Ile21-Met119/VMAPRTLVL peptide) partial recombinant protein with His-Avi tag at C-terminus expressed in HEK293 cells.
Sequence	Gly25-Ile305;Ile21-Met119;VMAPRTLVL peptide
Host	Human
Theoretical MW (kDa)	258
Form	Lyophilized
Preparation Method	Mammalian cell (HEK293) expression system
Purity	> 95% as determined by Tris-Bis PAGE;> 95% as determined by SEC-HPLC
Endotoxin Level	< 1 EU per 1 ug of protein (determined by LAL method)

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Quality Control Testing	SEC-HPLC SEC-HPLC The purity of Human HLA-E*01:03&B2M&Peptide (VMAPRTLVL) Tetramer is greater than 95% as determined by SEC-HPLC. Tris-Bis PAGE Human HLA-E*01:03&B2M&Peptide (VMAPRTLVL) Tetramer on Tris-Bis PAGE under Non reducin g (N) condition. The purity is greater than 95%.
Recommend Usage	Biological Activity ELISA SEC-HPLC SPR Tris-Bis PAGE The optimal working dilution should be determined by the end user.
Storage Buffer	Lyophilized from filtered solution in PBS, pH 7.4 (5% trehalose).
Storage Instruction	After reconstitution with deionized water to a final concentration more than 100 ug/ml, store at 4°C for 1 week. For long term storage, store at -80°C for 1 year. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- Enzyme-linked Immunoabsorbent Assay
- Surface Plasmon Resonance

  Human NKG2A&CD94, mFc Tag captured on CM5 Chip via anti-mouse antibody can bind Human HLA-E*01:03&B2M&Peptide (VMAPRTLVL) Tetramer, His Tag with an affinity constant of 17.61 nM as determined in SPR assay (Biacore T200) (QC Test).

- Surface Plasmon Resonance

  Human NKG2C&CD94, His Tag immobilized on CM5 Chip can bind Human HLA-E*01:03&B2M&Peptide (VMAPRTLVL) Tetramer, His Tag with an affinity constant of 1.65 uM as determined in SPR assay (Biacore T200).

Gene Info — B2M

Entrez GeneID	567
Protein Accession#	P13747;P61769;VMAPRTLVL
Gene Name	B2M

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Gene Alias	-
Gene Description	beta-2-microglobulin
Omim ID	109700 241600
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a serum protein found in association with the major histocompatibility complex (MHC) class I heavy chain on the surface of nearly all nucleated cells. The protein has a predominantly beta-pleated sheet structure that can form amyloid fibrils in some pathological conditions. A mutation in this gene has been shown to result in hypercatabolic hypoproteinemia
Other Designations	beta chain of MHC class I molecules|beta-2-microglobin

Gene Info — HLA-E

Entrez GeneID	3133
Protein Accession#	P13747;P61769;VMAPRTLVL
Gene Name	HLA-E
Gene Alias	DKFZp686P19218, EA1.2, EA2.1, HLA-6.2, MHC, QA1
Gene Description	major histocompatibility complex, class I, E
Omim ID	143010
Gene Ontology	Hyperlink
Gene Summary	HLA-E belongs to the HLA class I heavy chain paralogues. This class I molecule is a heterodimer consisting of a heavy chain and a light chain (beta-2 microglobulin). The heavy chain is anchored in the membrane. HLA-E binds a restricted subset of peptides derived from the leader peptides of other class I molecules. The heavy chain is approximately 45 kDa and its gene contains 8 exons. Exon one encodes the leader peptide, exons 2 and 3 encode the alpha1 and alpha2 domains, which both bind the peptide, exon 4 encodes the alpha3 domain, exon 5 encodes the transmembrane region, and exons 6 and 7 encode the cytoplasmic tail. [provided by RefSeq
Other Designations	HLA class I histocompatibility antigen, E alpha chain|MHC HLA-E alpha-1|MHC HLA-E alpha-2.1|MHC class I antigen|OTTHUMP00000029214|lymphocyte antigen

Pathway

- Allograft rejection
- Antigen processing and presentation

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- Antigen processing and presentation
- Autoimmune thyroid disease
- Cell adhesion molecules (CAMs)
- Endocytosis
- Graft-versus-host disease
- Natural killer cell mediated cytotoxicity
- Type I diabetes mellitus

Disease

- Abortion
- Acute Disease
- Anemia
- Arthritis
- Bacterial Infections
- Behcet Syndrome
- Bone Marrow Diseases
- Carcinoma
- Cardiovascular Diseases
- Chorioamnionitis
- Coronary Aneurysm
- Cytomegalovirus Infections
- Diabetes Mellitus
- Disease
- Edema
- Fetal Membranes
- Gastritis

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- Genetic Predisposition to Disease
- Genetic Predisposition to Disease
- Graft vs Host Disease
- HIV Infections
- Kidney Failure
- Lupus Erythematosus
- Mucocutaneous Lymph Node Syndrome
- Nasopharyngeal Neoplasms
- Neoplasms
- Obstetric Labor
- Osteoarthritis
- Parkinson disease
- Postoperative Complications
- Pre-Eclampsia
- Premature Birth
- Spondylitis
- Stomach Neoplasms

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