

Product Data Sheet

HLA-E*0103 Complex Protein, Human (Biotinylated, HEK293, His-Avi)

Cat. No.:	HY-P77759
Synonyms:	HLAE; sHLA-E; HLAE; MHC class I antigen E; MHC HLA-E alpha-1; MHC HLA-E alpha-2.1; MHC; QA1
Species:	Human
Source:	HEK293
Accession:	P13747 (G25-I305)&P61769 (I21-M119)&VMAPRTLVL
Gene ID:	3133&567
Molecular Weight:	52-60 kDa

PROPERTIES	
TROTERTED	
Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

HLA-E*0103 Complex, a non-classical major histocompatibility class Ib molecule, plays a pivotal role in immune self-nonself discrimination. This molecule forms a complex with B2M/beta-2-microglobulin and selectively binds nonamer self-peptides derived from the signal sequence of classical MHC class Ia molecules, specifically VL9 peptides (VMAPRT[V/L][L/V/I/F]L). The peptide-bound HLA-E-B2M heterotrimeric complex serves as a ligand for the inhibitory receptor KLRD1-KLRC1 on natural killer (NK) cells, enabling these cells to monitor the expression of other MHC class I molecules in healthy cells and tolerate self. During cellular stress, HLA-E*0103 preferentially binds signal sequence-derived peptides from stress-induced chaperones, resulting in impaired protection from NK cells. Moreover, it binds signal sequence-derived peptides from non-classical MHC class Ib HLA-G molecules, acting as a ligand for the NK cell activating receptor KLRD1-KLRC2, potentially contributing to adaptive NK cell functions and maternal-fetal tolerance during pregnancy. Additionally, HLA-E*0103 can bind and present pathogen-derived peptides to alpha-beta T cell receptors on unconventional CD8-positive cytotoxic T cells, triggering an antimicrobial immune response. This molecule also presents specific peptides from viruses like human cytomegalovirus, facilitating immune tolerance to infected cells.

Caution: Product has not been fully validated for medical applications. For research use only.

 Tel: 609-228-6898
 Fax: 609-228-5909
 E-mail: tech@MedChemExpress.com

 Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA