Recombinant HLAE protein (His tag)

Catalog Number	546769
Synonyms	MHC class I antigen E; sHLA-E
Species	Human
Expression System	E. coli
Accession	P13747
Molecular Weight	Predictes a molecular mass of 34.23 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Amino Acid Sequence	MSKIKGSHSL KYFHTSVSRP GRGEPRFISV GYVDDTQFVR FDNDAASPRM VPRAPWMEQE GSEYWDRETR SARDTAQIFR VNLRTLRGYY NQSEAGSHTL QWMHGCELGP DGRFLRGYEQ FAYDGKDYLT LNEDLRSWTA VDTAAQISEQ KSNDASEAEH QRAYLEDTCV EWLHKYLEKG KETLLHLEPP KTHVTHHPIS DHEATLRCWA LGFYPAEITL TWQQDGEGHT QDTELVETRP AGDGTFQKWA AVVVPSGEEQ RYTCHVQHEG LPEPVTLRWK PASQPTIPIL EHHHHHH
Form	Lyophilized powder
Formulation	Lyophilized from sterile 25 mM HEPES, 20 mM NaCl, pH 8.0
Purity	>90%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 22-305 aa (P13747) were fused with C-terminal 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

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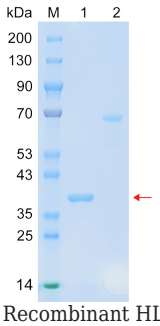
Recombinant HLA-E Fragment (aa 22-305) – a high-purity, functional fragment of the human HLA class I histocompatibility antigen, alpha chain E, encompassing the Ig-like C1-type domain. This product is ideal for investigating immune regulation, peptide presentation, and HLA-E-mediated signaling in natural killer (NK) and T cell responses.
HLA-E is a non-classical major histocompatibility class Ib molecule critical for immune self-nonself discrimination. In complex with beta-2-microglobulin, it binds self-peptides derived from classical MHC class I signal sequences, serving as a ligand for NK cell inhibitory receptors like KLRD1-KLRC1 to maintain self-tolerance. Under cellular stress or infection, HLA-E presents pathogen-derived peptides (e.g., from HIV, mycobacteria, or SARS-CoV-2) to unconventional CD8-positive T cells, triggering antimicrobial responses. It also plays roles in viral immune evasion (e.g., by human cytomegalovirus and HIV-1) and maternal-fetal tolerance. The full-length protein is primarily localized to the cell membrane as a single-pass type I protein, with a soluble form (sHLA-E) secreted into the extracellular space. The recombinant fragment (aa 22-305) includes the functional Ig-like C1-type domain, enabling focused studies on peptide binding and receptor interactions.

Validation

SDS-PAGE



Recombinant HLAE protein (His tag) SDS-PAGE
M: Marker; Lane 1: HLAE; Lane 2: BSA