

Recombinant Human HLA-A Protein, His-tagged

Cat. No. HLA-A-2242H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human HLA-A Protein (Tyr83-Ser352) with a N-His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Tyr83-Ser352
Description	HLA-A 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. Class I molecules play a central role in the immune system by presenting peptides derived from the endoplasmic reticulum lumen so that they can be recognized by cytotoxic T cells. They are expressed in nearly all cells. The heavy chain is approximately 45 kDa and its gene contains 8 exons. Exon 1 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. Polymorphisms within exon 2 and exon 3 are responsible for the peptide binding specificity of each class one molecule. Typing for these polymorphisms is routinely done for bone marrow and kidney transplantation. More than 6000 HLA-A alleles have been described. The HLA system plays an important role in the occurrence and outcome of infectious diseases, including those caused by the malaria parasite, the human immunodeficiency virus (HIV), and the severe acute

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respiratory syndrome coronavirus (SARS-CoV). The structural spike and the nucleocapsid proteins of the novel coronavirus SARS-CoV-2, which causes coronavirus disease 2019 (COVID-19), are reported to contain multiple Class I epitopes with predicted HLA restrictions. Individual HLA genetic variation may help explain different immune responses to a virus across a population.

Form	Freeze-dried powder
Molecular Mass	Predicted Molecular Mass: 34.1 kDa Accurate Molecular Mass: 34 kDa
Endotoxin	<1.0 EU per 1g (determined by the LAL method).
Purity	> 90%
Applications	Positive Control; Immunogen; SDS-PAGE; WB.
Stability	The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.
Storage Buffer	20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

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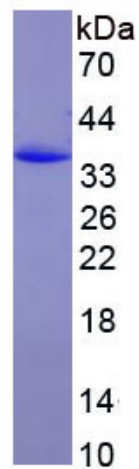
GENE INFORMATION

Gene Name	HLA-A major histocompatibility complex, class I, A [Homo sapiens (human)]
Official Symbol	HLA-A
Synonyms	HLA-A; major histocompatibility complex, class I, A; HLAA; HLA class I histocompatibility antigen, A alpha chain HLA class I histocompatibility antigen, A-1 alpha chain MHC class I antigen HLA-A heavy chain leukocyte antigen class I-A
Gene ID	3105
mRNA Refseq	NM_001242758
Protein Refseq	NP_001229687
MIM	142800
UniProt ID	P04439

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