

Recombinant Human HLA-A Protein, C-His tagged

Cat. No. HLA-A-01H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	DNA sequence encoding the Human (HLA-A*02:01) AA25-305 [accession# P04439] and the B2M protein AA2-119 [accession# P61769], fused to the mutant P53 R175H epitope HMTEVVRHC .This complex includes a C terminal polyHis and was expressed in HEK cells.
Species	Human
Source	HEK293
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.

Molecular Mass

Recombinant HLA-A/P53 R175H has a calculated mass of approximately 50 kDa. Due to glycosylation migrates as an approximately 60 kDa protein under reducing conditions in SDS-PAGE.

Endotoxin

less than 0.1 ng/μg (1EU/μg).

Purity

> 95% by nonreducing PAGE and HPLC

Usage

This product is for research purposes only. It may not be used for therapeutics or diagnostic purposes.

Storage

The lyophilized protein is stable for at least 2 years from date of receipt at -20 centigrade.

Storage Buffer

Recombinant HLA-A*02:01 P53 R175H was lyophilized from 0.2 μm filtered PBS solution pH7.4

Reconstitution

A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.

GENE INFORMATION

Gene Name

HLA-A major histocompatibility complex, class I, A [Homo sapiens (human)]

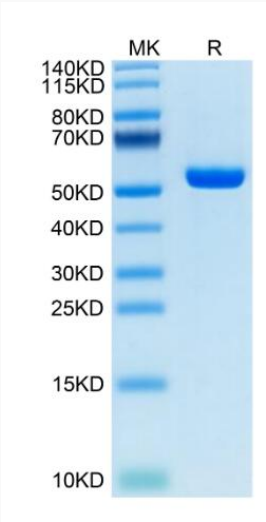
Official Symbol

HLA-A

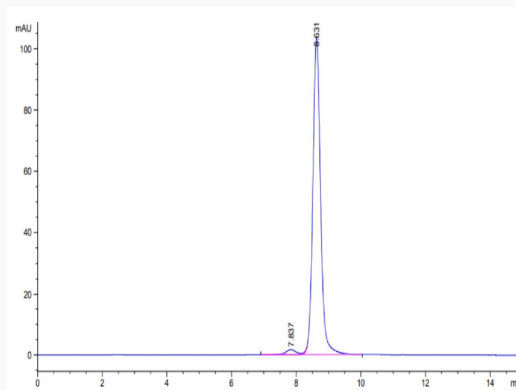
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Synonyms	HLA-A; major histocompatibility complex, class I, A; HLAA; HLA class I histocompatibility antigen, A alpha chain; HLA class I histocompatibility antigen, A-1 alpha chain; MHC class I antigen HLA-A heavy chain; leukocyte antigen class I-A
Gene ID	3105
mRNA Refseq	NM_002116
Protein Refseq	NP_002107
MIM	142800
UniProt ID	P04439
SDS-PAGE	 140KD 115KD 80KD 70KD 50KD 40KD 30KD 25KD 15KD 10KD MK R 1 µg loaded Tris-Bis PAGE under reducing condition. The purity is greater than 95%.

SEC-HPLC



The purity of P53 R175H (HLA-A*02:01) complex was greater than 95% as determined by SEC-HPLC.

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