

## Product datasheet for TP300661M

### HLAA (HLA-A) (NM\_002116) Human Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human major histocompatibility complex, class I, A (HLA-A), 100 µg
Species:	Human
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>RC200661 protein sequence <b>Red</b> =Cloning site <b>Green</b> =Tags(s)
	MAVMAPRTLLLLLSGALALTQTWAGSHSMRYFFTSVSRPGRGEPRIAVGVDDTQFVRFSDAASQKME PRAPWIEQEGPEYWDQETRNMKAHSQTDRLNLGTLRGYYNQSEDSHTIQIMYGCDVGPDRFLRGYRQD AYDGKDYIALNEDLRSWTAADMAAQITKRKWEAVHAAEQRRVYLEGRCVDGLRRYLENGKETLQRTPPK THMTHHPISDHEATLRCWALGFYPAEITLWQRDGEDQTQDTELVETRPAGDGTGFQKWAAVVPSGEEQR YTCHVQHEGLPKPLTLRWELSSQPTIPIVGIAGLVLLGAVITGAVVAVMWRRKSSDRKGGSYTQAASS DSAQGSVDVSLTACKV
	<b>TRTRPLEQKLISEEDLAANDILDYKDDDDKV</b>
Tag:	C-Myc/DDK
Predicted MW:	38.5 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Preparation:	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	<a href="#">NP_002107</a>
Locus ID:	3105



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UniProt ID: [P01892](#), [P04439](#), [B1PKY1](#), [B2R7U3](#), [P30443](#)

RefSeq Size: 1636

Cytogenetics: 6p22.1

RefSeq ORF: 1095

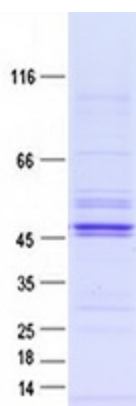
Synonyms: HLAA

**Summary:** 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 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.[provided by RefSeq, Aug 2020]

**Protein Families:** Transmembrane

**Protein Pathways:** Allograft rejection, 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, Viral myocarditis

### Product images:



Coomassie blue staining of purified HLA-A protein (Cat# [TP300661]). The protein was produced from HEK293T cells transfected with HLA-A cDNA clone (Cat# [RC200661]) using MegaTran 2.0 (Cat# [TT210002]).