

Product datasheet for PH300661

HLAA (HLA-A) (NM_002116) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	HLA MS Standard C13 and N15-labeled recombinant protein (NP_002107)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC200661
Predicted MW:	40.8 kDa
Protein Sequence:	>RC200661 protein sequence Red=Cloning site Green=Tags(s)
	MAVMAPRTL L L L L L S G A L A L T Q T W A G S H S M R Y F F T S V S R P G R G E P R F I A V G Y V D D T Q F V R F D S D A A S Q K M E P R A P W I E Q E G P E Y W D Q E T R N M K A H S Q T D R A N L G T L R G Y Y N Q S E D G S H T I Q I M Y G C D V G P D G R F L R G Y R Q D A Y D G K D Y I A L N E D L R S W T A A D M A A Q I T K R K W E A V H A A E Q R R V Y L E G R C V D G L R R Y L E N G K E T L Q R T D P P K T H M T H H P I S D H E A T L R C W A L G F Y P A E I T L W Q R D G E D Q T Q D T E L V E T R P A G D G T F Q K W A A V V P S G E E Q R Y T C H V Q H E G L P K P L T L R W E L S S Q P T I P I V G I I A G L V L L G A V I T G A V V A A V M W R R K S S D R K G G S Y T Q A A S S D S A Q G S D V S L T A C K V
	TRTRPLEQKLI SEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- ¹³ C ₆ , ¹⁵ N ₄]-L-Arginine and [U- ¹³ C ₆ , ¹⁵ N ₂]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<u>NP_002107</u>
RefSeq Size:	1636
RefSeq ORF:	1095
Synonyms:	HLAA
Locus ID:	3105



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

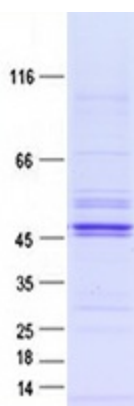
Cytogenetics: 6p22.1

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]).