

Product datasheet for RC216585

HLAC (HLA-C) (NM_002117) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HLAC (HLA-C) (NM_002117) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HLAC
Synonyms:	D6S204; HLA-JY3; HLAC; HLC-C; MHC; PSORS1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC216585 representing NM_002117 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGCGGGTCATGGCGCCCCGAGCCCTCCTCCTGCTGCTCTCGGGAGGCCTGGCCCTGACCGAGACCTGGG
CCTGCTCCACTCCATGAGGATTTTCGACACCGCCGTGTCCCGGCCCGCCGGAGAGCCCCGTTTCAT
CTCAGTGGGCTACGTGGACGACACGCAGTTCGTGCGGTTTCGACAGCGACCGCGAGTCCGAGAGGGGAG
CCGCGGGCGCCGTGGGTGGAGCAGGAGGGGCCGAGATTGGGACCGGGAGACACAGAAGTACAAGCGCC
AGGCACAGGCTGACCGAGTGAGCCTGCGGAACCTGCGCGGCTACTACAACAGAGCGAGGACGGGTCTCA
CACCTCCAGAGGATGTCTGGCTGCGACCTGGGGCCCGACGGGGCCCTCCTCCGCGGGTATGACCACTCC
GCCTACGACGGCAAGGATTACATCGCCCTGAACGAGGACCTGCGCTCCTGGACCGCCGCGACACCGCGG
CTCAGATCACCCAGCGCAAGTTGGAGGGCGCCCGTGGCGGAGCAGCTGAGAGCCTACCTGGAGGGCAC
GTGCGTGGAGTGGCTCCGCAGATACCTGGAGAACGGGAAGGAGACGCTGCAGCGCGCAGAACCCCCAAAG
ACACACGTGACCCACCACCCCTCTCTGACCATGAGGCCACCCTGAGGTGCTGGGCCCTGGGCTTCTACC
CTGCGGAGATCACACTGACCTGGCAGCGGGATGGGAGGACCAGACCCAGGACACCGAGCTTGTGGAGAC
CAGGCCAGCAGGAGATGGAACCTTCCAGAAGTGGCAGCTGTGGTGGTGCCTTCTGGACAAGAGCAGAGA
TACAGTGCCATATGCAGCACGAGGGGCTGCAAGAGCCCTCACCTGAGCTGGAGCCATCTTCCAGCAG
CCACCATCCCATCATGGGCATCGTTGCTGGCCTGGCTGCTGTTGTCTAGCTGTCTTGGAGCTGT
GGTCACCGCTATGATGTGTAGGAGGAAGAGCTCAGGTGAAAAAGGAGGGAGCTGCTCTCAGGCTGCGTGC
AGCAACAGTGCCAGGGCTCTGATGAGTCTCTCATCACTGTAAGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC216585 representing NM_002117
Red=Cloning site Green=Tags(s)

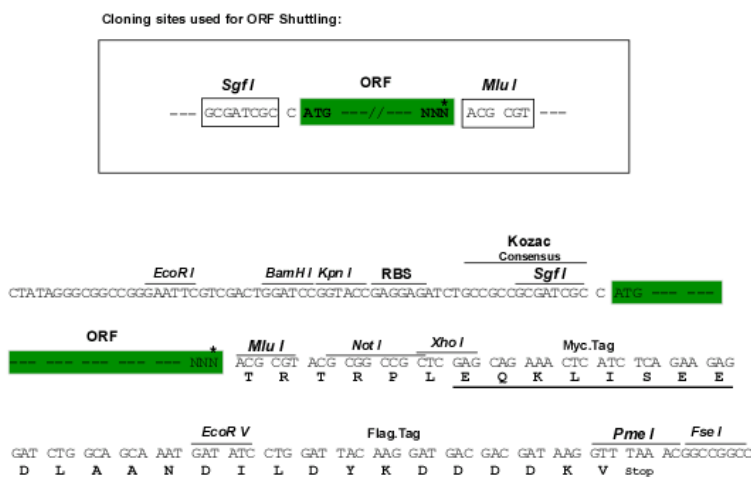
MRVMAPRALLLLLSGGLALTETWACSHSMRYFDTAVSRPGRGEPRFISVGYVDDTQFVRFSDAASPRGE
 PRAPWVEQEGPEYWDRETQKYKRQAQADRVSLRNLRGYYNQSEDSHTLQRMSCDLGPDGRLLRGYDQS
 AYDGKDYIALNEDLRSWTAADTAAQITQRKLEAARAAEQRAYLEGTCEWLRRYLENGKETLQRAEPPK
 THVTHHPLSDHEATLRCWALGFYPAEITLTWQRDGEDQTQDELVETRPAGDGTQKWAAVVVPSSGQEQR
 YTCHMQHEGLQEPLTLSWEPSSQPTIPIIMGIVAGLAVLVVLAVLGA VVTAMMCRKRKSSGGKGGSCSQAAC
 SNSAQGSDESLITCKA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg4288_d10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_002117

ORF Size: 1098 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_002117.6](#)

RefSeq Size: 1543 bp

RefSeq ORF: 1101 bp

Locus ID: 3107

UniProt ID: [P10321](#)

Cytogenetics: 6p21.33

Domains: MHC_I, ig, IgC1

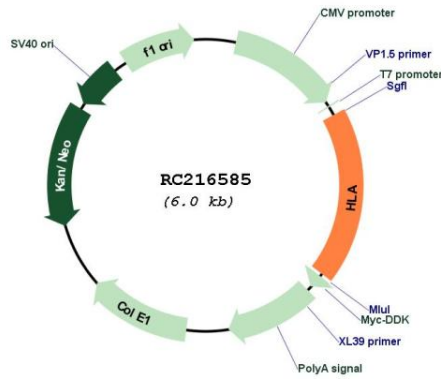
Protein Families: Secreted Protein, Transmembrane

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

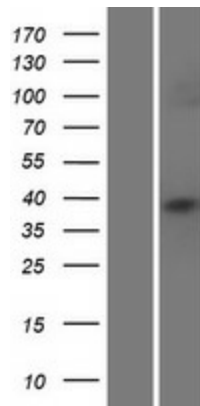
MW: 40.6 kDa

Gene Summary: HLA-C 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 endoplasmic reticulum lumen. They are expressed in nearly all cells. The heavy chain is approximately 45 kDa and its gene contains 8 exons. Exon one encodes the leader peptide, exons 2 and 3 encode the alpha1 and alpha2 domain, 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. About 6000 HLA-C 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]

Product images:



Circular map for RC216585



Western blot validation of overexpression lysate (Cat# [LY419521]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216585 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).