

## Product datasheet for SC126146

### HLAC (HLA-C) (BC002463) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	HLAC (HLA-C) (BC002463) Human Untagged Clone
Tag:	Tag Free
Symbol:	HLAC
Synonyms:	D6S204; HLA-JY3; HLAC; HLC-C; PSORS1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for BC002463 edited  
CGAGATGGGGTTCATGGCGCCCCGAACCCTCATCTGCTGCTCTCGGGAGCCCTGGCCCT  
GACCGAGACCTGGGCCTGCTCCCACTCCATGAGGTATTTCTACACCGCCGTGTCGGGCC  
CGGCCGCGGAGAGCCCCGCTTCATCGCAGTGGGCTACGTGGACGACACGAGTTCGTGCG  
GTTTCGACAGCGACGCGCGAGTCCAAGAGGGGAGCCGCGGGCGCCGTGGGTGGAGCAGGA  
GGGGCCGGAGTATTGGGACCGGGAGACACAGAAGTACAAGCGCCAGGCACAGACTGACCG  
AGTGAGCCTGCGGAACCTGCGCGGCTACTACAACCAGAGCGAGGCCGGTCTCACACCCT  
CCAGTGGATGTATGGCTGCGACCTGGGGCCGACGGGCGCCTCCTCCGCGGTATGACCA  
GTCCGCTACGACGGCAAGGATTACATCGCCCTGAACGAGGACCTGCGCTCCTGGACCGC  
CGCGGACAGCGGCTCAGATCACCCAGCGCAAGTGGGAGGCGCCCGTGGCGGGAGCA  
GCAGAGAGCCTACCTGGAGGGCACGTGCGTGGAGTGGCTCCGAGATACCTGGAGAACGG  
GAAGGAGACGCTGACGCGCGGAACACCCAAAGACACAGTGACCCACCATCTCGTCTC  
TGACCATGAGGCCACCCTGAGGTGCTGGGCCCTGGGCTTCTACCCTGCGGAGATCACACT  
GACCTGGCAGCGGGATGGCGAGGACAACTCAGGACACCGAGCTTGTGGAGACCAGGCC  
AGCAGGAGATGGAACCTTCCAGAAGTGGGACAGCTGTGGTGGTGCCTTCTGGAGAAGGCA  
GAGATACAGTGCATGTGCAGCACGAGGGGCTGCCGGAGCCCTCACCTGAGATGGGA  
GCCATCTCCAGCCACCATCCCCATCGTGGGCATCGTTGCTGGCCTGGCTGTCTCTGGC  
TGTCTAGCTGTCTAGGAGCTGTGGTGGCTGTGTTATGTGTAGGAGGAAGAGCTCAGG  
TGGAAAAGGAGGGAGCTGCTCTCAGGCTGCGTCCAGCAACAGTGCCAGGGCTCTGATGA  
GTCTCTCATCGCTTGTAAGCCTGAGACAGCTGCCTGTGTGGGACTGAGATGCAGGATTT  
CTTCACACCTCTCTTTGTGACTTCAAGAGCCTCTGGCATCTCTTTCTGCAAAGGCATCT  
GAATGCGTCTGCGTTCCTGTTAGCATAATGTGAGGAGGTGGAGAGACAGCCACCCCGT  
GTCCACCGTGACCCCTGTCCCACTGACCTGTGTTCCCTCCCGATCATCTTTCTGT  
TCCAGAGAAGTGGGCTGGATGTCTCCATCTGTCTCAACTTTACGTGTACTGAGCTGCA  
ACTTCTACTTCCCTACTGAAAATAAGAATCTGAATATAAATTTGTTTTCTCAAATTTT  
GCTATGAGAGGTTGATGGATTAATTAATAAGTCAATCCCTGGAAGTTGAGAGAGCAAAT  
AAAGACCTGAGAACCTTCCAGAAAAA



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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for BC002463 unedited AGGTTTCATATTTGTATACGACTCATATAGGCGGCCGCGTAATTCGCACGAGGGATGGCCG TCATGGCGCCCGAACCCTCCTCCTGCTACTCTCGGGGGCCCTGGCCCTGACCCAGACCT GGGCGGGCTCCCCTCCATGAGGTATTTCTTACATCCGTGTCCCGGCCCGGCCGCGGGG AGCCCCGTTTCATCGCCGTGGGTACGTGGACGACACGCAGTTCGTGCGGTTTCGACAGCG ACGCCCGAGCCAGAAGATGGAGCCGCGGGCGCCGTGGATAGAGCAGGAGGGGCCGGAGT ATTGGGACCAGGAGACCGGAATATGAAGGCCCACTCACAGACTGACCCGAGCGAACCTGG GGACCCTGCGCGGCTACTACAACCAGAGCGAGGACGGTTCTCACACCATCCAGATAATGT ATGGCTGCGACGTGGGGCCGACGGGCGCTTCTCCGCGGGTACCGCAGGACGCGCTACG ACGGCAAGGATTACATCGCCCTGAACGAGGACCTGCGCTCTTGGACCGCGCGGACATGG CAGCTCAGATCACCAAGCGCAAGTGGGAGGCGGTCCATGCGGCGGAGCAGCGGAGAGTCT ACCTGGAGGGCCGGTGCCTGGACGGGCTCCGCAGATACCTGGAGAACGGGAAGGAGACGC TGCAGCGCACGGACCCCCCAAGACACATATGACCCACCACCCCATCTCTGACCATGAGG CCACCCCTGAGTCTGGCCCTGGGCTTCTACCCTGCGGAGATCACACTGACCTGGCAGC GGGATGGGGAGGACCAGACCCANGACACGGAGCTCGTGGAGACCANGCCTGCAGGGGATG GAACCTCCAAAAGTGGCGGCTGTGGTGGTCCCTCTGGAGAGAGCAGAATCCCTGCCTGT GCACATGAGGTCTGCCCAACCC
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	BC002463
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">BC002463.1</a> , <a href="#">AAH02463.1</a>
<b>RefSeq Size:</b>	1540 bp
<b>Locus ID:</b>	3107
<b>Cytogenetics:</b>	6p21.33
<b>Protein Families:</b>	Secreted Protein, Transmembrane
<b>Protein Pathways:</b>	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

**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]