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Product Information

MemDX™ Membrane Protein Human HLA-C (Major histocompatibility complex, class I, C)

Full Length

Cat. No.: **MPC2019K**
This product is for research use only and is not intended for diagnostic use.

This product is a 40.6 kDa Human HLA-C membrane protein expressed in HEK293. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

Product Specifications

Host Species
Human

Target Protein
HLA-C

Protein Length
Full length

Protein Class
Immunity

Molecular Weight
40.6 kDa

TMD
1

Sequence
MRVMAPRALLLLLSGGLALTETWACSHSMRYFDTAVSRPGRGEPRFISVG
YVDDTQFVRFDSDAASPRGEPRAPWVEQEGPEYWDRETQKYKRQAQADRV
SLRNLRGYYNQSEDGSHTLQRMSGCDLGPDGRLLRGYDQSAYDGKDYIAL
NEDLRSWTAADTAAQITQRKLEAARAAEQLRAYLEGTCVEWLRRYLENGK
ETLQRAEPPKTHVTHHPLSDHEATLRCWALGFYPAEITLTWQRDGEDQTQ
DTELVETRPAGDGTFQKWAAVVVPSGQEQRYTCHMQHEGLQEPLTLSWEP
SSQPTIPIMGIVAGLAVLVVLAVLGAVVTAMMCRRKSSGGKGGSCSQAAC
SNSAQGSDESLITCKA

Product Description

Expression Systems
HEK293

Tag

Based on specific requirements

Protein Format

Detergent or based on specific requirements

Form

Liquid

Storage

Aliquot and store at -20°C or lower. For long term storage, we recommend to store at -72°C or lower. Avoid freeze/thaw cycles.

Target

Target Protein

HLA-C

Full Name

Major histocompatibility complex, class I, C

Introduction

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.

Alternative Names

HLA-C; MHC; HLAC; HLC-C; D6S204; PSORS1; HLA-JY3; HLA class I histocompatibility antigen, C alpha chain; HLA-C antigen; MHC class I antigen heavy chain HLA-C; human leukocyte antigen-C alpha chain; major histocompatibility antigen HLA-C; Major histocompatibility complex, class I, C

Gene ID

3107

UniProt ID

P10321