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KO-Validated Anti-HLA-C Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2403

Product Information

Application	WB
Primary Accession	P10321
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG
Clone Names	24GB8545
Calculated MW	40649
Gene Name	HLA-C
Aliases	HLA-C; Major Histocompatibility Complex, Class I, C; HLA Class I Histocompatibility Antigen, C Alpha Chain; HLA-JY3; D6S204; PSORS1; HLAC; Major Histocompatibility Antigen HLA-C; MHC Class I Antigen Heavy Chain HLA-C; Human Leukocyte Antigen-C Alpha Chain; Psoriasis Susceptibility 1; Human Leukocyte Antigen C; HLA-C Antigen; HLA-Cw; HLC-C; MHC
Immunogen	Recombinant human HLA-C

Additional Information

Gene ID	3107
Other Names	HLA class I histocompatibility antigen, C alpha chain, HLA-C, HLA-Cw, Human leukocyte antigen C, HLA-C (HGNC:4933), HLAC

Protein Information

Name	HLA-C (HGNC:4933)
Synonyms	HLAC
Function	Antigen-presenting major histocompatibility complex class I (MHCI) molecule with an important role in reproduction and antiviral immunity (PubMed:11172028, PubMed:20104487, PubMed:20439706, PubMed:20972337, PubMed:24091323, PubMed:28649982, PubMed:29312307). In complex with B2M/beta 2 microglobulin displays a restricted repertoire of self and viral peptides and acts as a dominant ligand for inhibitory and activating killer immunoglobulin receptors (KIRs) expressed on NK cells (PubMed:16141329). In an allogeneic setting, such as during pregnancy, mediates interaction of extravillous trophoblasts with KIR on uterine NK cells and regulate trophoblast invasion necessary for placentation and overall fetal growth (PubMed:20972337, PubMed:24091323). During viral infection, may present viral peptides with low affinity for KIRs, impeding KIR-mediated inhibition through peptide antagonism and favoring lysis of infected cells (PubMed:20439706). Presents a restricted repertoire of viral

	peptides on antigen-presenting cells for recognition by alpha-beta T cell receptor (TCR) on HLA-C-restricted CD8-positive T cells, guiding antigen-specific T cell immune response to eliminate infected cells, particularly in chronic viral infection settings such as HIV-1 or CMV infection (PubMed:11172028, PubMed:20104487, PubMed:28649982). Both the peptide and the MHC molecule are recognized by TCR, the peptide is responsible for the fine specificity of antigen recognition and MHC residues account for the MHC restriction of T cells (By similarity). Typically presents intracellular peptide antigens of 9 amino acids that arise from cytosolic proteolysis via proteasome. Can bind different peptides containing allele-specific binding motifs, which are mainly defined by anchor residues at position 2 and 9. Preferentially displays peptides having a restricted repertoire of hydrophobic or aromatic amino acids (Phe, Ile, Leu, Met, Val and Tyr) at the C-terminal anchor (PubMed:25311805, PubMed:8265661).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass membrane protein
Tissue Location	Ubiquitous. Highly expressed in fetal extravillous trophoblasts in the decidua basalis (at protein level)

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