10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Mouse Monoclonal Antibody to HLA-B

Purified Mouse Monoclonal Antibody
Catalog # AO2444a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P01889
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2A11G7
Isotype	Mouse IgG1
Calculated MW	40460
Description	HLA-B 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. 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, exon 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. Hundreds of HLA-B alleles have been described.;
Immunogen	Purified recombinant fragment of human HLA-B (AA: 241-362) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide
Application Note	ELISA: 1/10000; WB: 1/500 - 1/2000; IHC: 1/200 - 1/1000; FCM: 1/200 - 1/400

Additional Information

Gene ID	3106
Other Names	AS; HLAB; Bw-47; Bw-50; SPDA1; B-4901; B-5001; HLA-Cw;
Dilution	WB~~1:1000 IHC~~1:100~500 FC~~1:10~50 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Monoclonal Antibody to HLA-B is for research use only and not for use in diagnostic or therapeutic procedures.

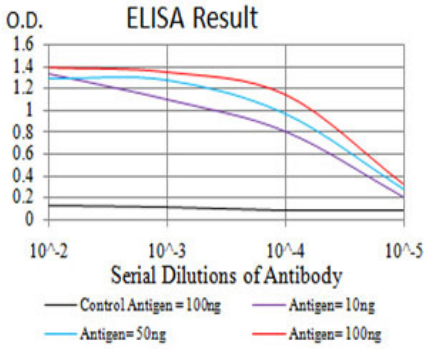
Protein Information

Name	HLA-B (HGNC:4932)
Synonyms	HLAB
Function	Antigen-presenting major histocompatibility complex class I (MHCI) molecule. In complex with B2M/beta 2 microglobulin displays primarily viral and tumor-derived peptides on antigen-presenting cells for recognition by alpha-beta T cell receptor (TCR) on HLA-B-restricted CD8-positive T cells, guiding antigen-specific T cell immune response to eliminate infected or transformed cells (PubMed:23209413, PubMed:25808313, PubMed:29531227, PubMed:9620674). May also present self-peptides derived from the signal sequence of secreted or membrane proteins, although T cells specific for these peptides are usually inactivated to prevent autoreactivity (PubMed:18991276, PubMed:7743181). 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 (PubMed:24600035, PubMed:29531227, PubMed:9620674). Typically presents intracellular peptide antigens of 8 to 13 amino acids that arise from cytosolic proteolysis via constitutive proteasome and IFNG-induced immunoproteasome (PubMed:23209413). Can bind different peptides containing allele-specific binding motifs, which are mainly defined by anchor residues at position 2 and 9 (PubMed:25808313, PubMed:29531227).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein

References

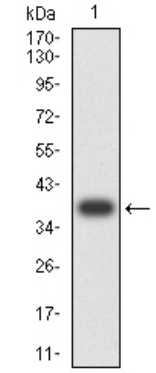
1.Pharmacogenomics J. 2015 Oct;15(5):467-72. ; 2.J Immunol. 2014 Jun 1;192(11):4967-76.;

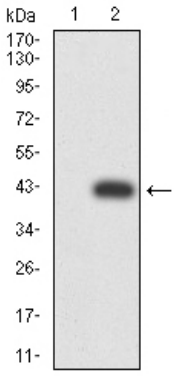
Images



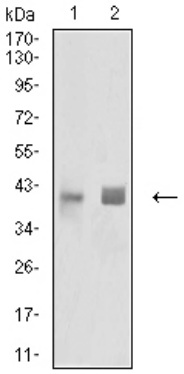
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

Western blot analysis using HLA-B mAb against human HLA-B (AA: 241-362) recombinant protein. (Expected MW is 38.4 kDa)

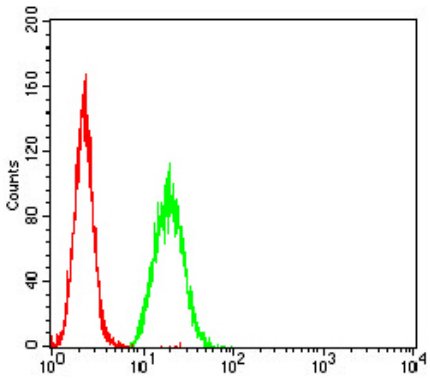




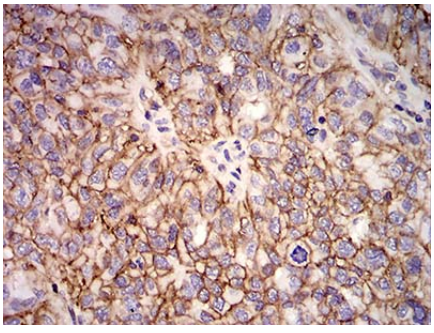
Western blot analysis using HLA-B mAb against HEK293 (1) and HLA-B (AA: 241-362)-hIgGFc transfected HEK293 (2) cell lysate.



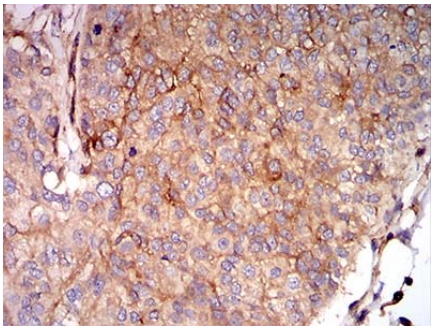
Western blot analysis using HLA-B mouse mAb against Ramos (1) and A431 (2) cell lysate.



Flow cytometric analysis of Hela cells using HLA-B mouse mAb (green) and negative control (red).



Immunohistochemical analysis of paraffin-embedded ovarian cancer tissues using HLA-B mouse mAb with DAB staining.



Immunohistochemical analysis of paraffin-embedded bladder cancer tissues using HLA-B mouse mAb with DAB staining.