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Mouse Monoclonal Antibody to HLA-B
Purified Mouse Monoclonal Antibody
Catalog # AO2444a

Specification

Mouse Monoclonal Antibody to HLA-B - Product Information

Application	**E, WB, FC, IHC**
Primary Accession	P01889
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**40.5kDa KDa**

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

Mouse Monoclonal Antibody to HLA-B - Additional Information

Gene ID 3106

Other Names
AS; HLAB; Bw-47; Bw-50; SPDA1; B-4901; B-5001; HLA-Cw;

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.

Mouse Monoclonal Antibody to HLA-B - 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

Mouse Monoclonal Antibody to HLA-B - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Mouse Monoclonal Antibody to HLA-B - Images

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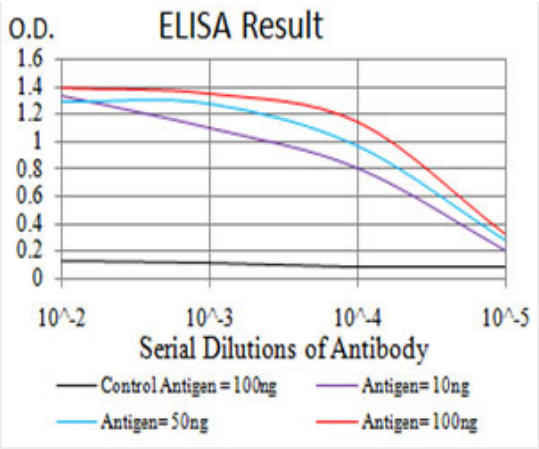
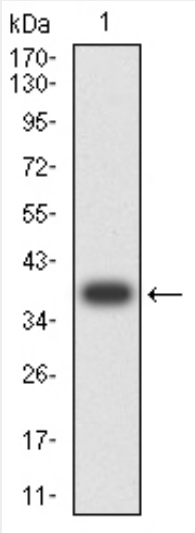
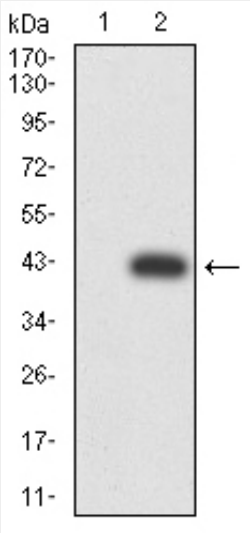


Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



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.

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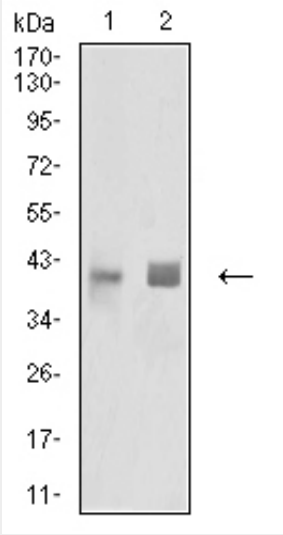
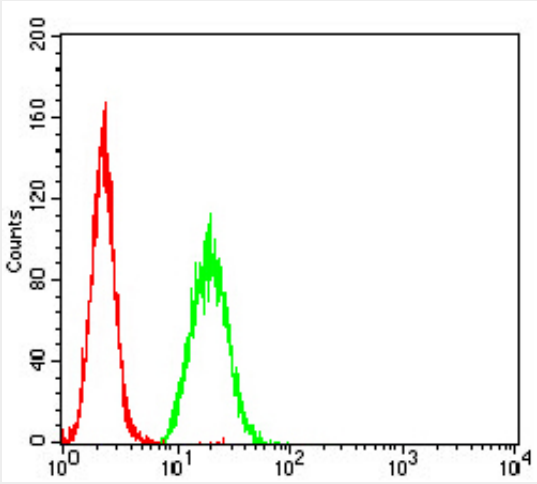
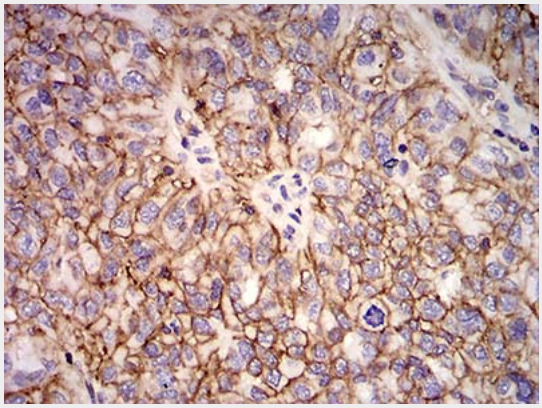


Western blot analysis using HLA-B mouse mAb against Ramos (1) and A431 (2) cell lysate.



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.

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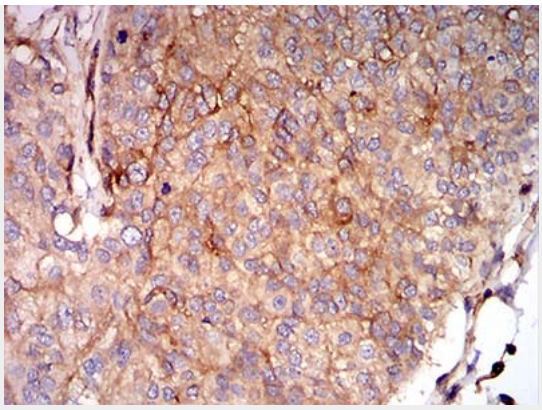

Immunohistochemical analysis of paraffin-embedded bladder cancer tissues using HLA-B mouse mAb with DAB staining.

Mouse Monoclonal Antibody to HLA-B - References

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