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HLA-B Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10679c

Product Information

Application	WB, E
Primary Accession	P01889
Other Accession	Q31610, P30486, NP_005505.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB28442
Calculated MW	40460
Antigen Region	182-208

Additional Information

Gene ID	3106
Other Names	HLA class I histocompatibility antigen, B-7 alpha chain, MHC class I antigen B*7, HLA-B, HLAB
Target/Specificity	This HLA-B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 182-208 amino acids from the Central region of human HLA-B.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HLA-B Antibody (Center) 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

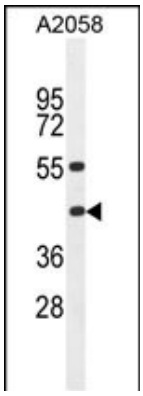
Background

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.

References

Parsons, M.S., et al. J. Infect. Dis. 202 SUPPL 3, S356-S360 (2010) :
Brockman, M.A., et al. J. Virol. 84(22):11937-11949(2010)
Noble, J.A., et al. Diabetes 59(11):2972-2979(2010)
Lipponen, K., et al. Diabetes (2010) In press :
Liao, Y.Q., et al. Zhongguo Shi Yan Xue Ye Xue Za Zhi 18(4):1055-1058(2010)

Images



HLA-B Antibody (Center) (Cat. #AP10679c) western blot analysis in A2058 cell line lysates (35ug/lane).This demonstrates the HLA-B antibody detected the HLA-B protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.