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HLA-B Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP10679c

Specification

HLA-B Antibody (Center) Blocking peptide - Product Information

Primary Accession P01889

HLA-B Antibody (Center) Blocking peptide - 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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

HLA-B Antibody (Center) Blocking peptide - 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:25808313, PubMed:29531227, PubMed:9620674, PubMed:23209413). 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:7743181, PubMed:18991276). 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:29531227,

PubMed:9620674, PubMed:24600035). 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

HLA-B Antibody (Center) Blocking peptide - Protocols

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

- Blocking Peptides

HLA-B Antibody (Center) Blocking peptide - Images

HLA-B Antibody (Center) Blocking peptide - Background

HLA-B belongs to the HLA class I heavy chain paralogues.This class I molecule is a heterodimer consisting of a heavy chainand a light chain (beta-2 microglobulin). The heavy chain isanchored in the membrane. Class I molecules play a central role inthe immune system by presenting peptides derived from theendoplasmic reticulum lumen. They are expressed in nearly allcells. The heavy chain is approximately 45 kDa and its genecontains 8 exons. Exon 1 encodes the leader peptide, exon 2 and 3encode the alpha1 and alpha2 domains, which both bind the peptide,exon 4 encodes the alpha3 domain, exon 5 encodes the transmembraneregion and exons 6 and 7 encode the cytoplasmic tail. Polymorphismswithin exon 2 and exon 3 are responsible for the peptide bindingspecificity of each class one molecule. Typing for thesepolymorphisms is routinely done for bone marrow and kidneytransplantation. Hundreds of HLA-B alleles have been described.

HLA-B Antibody (Center) Blocking peptide - 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)