HLA-B Antibody EP-4 / MHC Class I Antibody [clone EP-4] (V2577)

Catalog No.	Formulation	Size
V2577-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2577-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2577SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgM, kappa
Clone Name	EP-4
Purity	PEG precipitation
UniProt	P03989
Localization	Cell surface
Applications	Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-2ug/ml
Limitations	This HLA-B Antibody EP-4 / MHC Class I Antibody is available for research use only.



Description

HLA-B Antibody EP-4 / MHC Class I Antibody recognizes a member of the human leukocyte antigen B family, part of the classical major histocompatibility complex class I system. HLA-B molecules participate in immune surveillance by presenting peptides derived primarily from intracellular proteins to CD8-positive T lymphocytes. Recognition of peptide-HLA complexes enables cytotoxic T cells to detect cells expressing foreign or altered proteins and contributes to antiviral immunity, tumor immune surveillance and other adaptive immune responses.

HLA-B encodes a membrane-associated heavy chain that forms a heterodimer with beta-2 microglobulin. The extracellular portion of the HLA-B heavy chain contains alpha-1, alpha-2 and alpha-3 domains. The alpha-1 and alpha-2 domains form the peptide-binding groove, while the alpha-3 domain contributes to interactions involved in immune recognition. Peptides are loaded onto newly synthesized MHC class I molecules in the endoplasmic reticulum before stable peptide-HLA complexes are transported to the cell surface.

The HLA-B locus is highly polymorphic, producing numerous allelic variants with differences concentrated within the peptide-binding region. These sequence differences influence peptide-binding preferences and interactions with components of both adaptive and innate immunity. HLA-B variation has consequently been studied extensively in transplantation, infectious disease, autoimmunity, inflammatory disorders, cancer immunology and pharmacogenetics.

HLA-B27 is one of the best-studied HLA-B variants because of its strong association with ankylosing spondylitis and related spondyloarthropathies. Clone EP-4 was generated using lymphocytes from an HLA-B27-positive individual as the immunogen and has been characterized as recognizing cell-surface HLA-B27. Because independent clone-specific epitope characterization is limited, researchers requiring precise discrimination among HLA-B alleles should consider the reported specificity in the context of their experimental design.

NSJ Bioreagents provides this HLA-B Antibody for research into MHC class I biology, antigen presentation and HLA-associated immune responses. An MHC Class I Antibody targeting HLA-B can support investigation of the molecular interactions connecting cell-surface HLA expression with T cell recognition and immune regulation.

For additional information on HLA-B biology and complementary antibody validation, visit our HLA-B Antibody JOAN-1 / MHC Class I HLA-B Antibody page.

Application Notes

Optimal dilution of the HLA-B Antibody EP-4 / MHC Class I Antibody should be determined by the researcher.

Immunogen

Lymphocytes from an HLA-B27 patient were used as the immunogen for the HLA-B Antibody EP-4.

Storage

Store the HLA-B Antibody EP-4 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

HLA-B antibody, HLAB antibody, Human Leukocyte Antigen B antibody, MHC Class I antibody, HLA Class I antibody

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