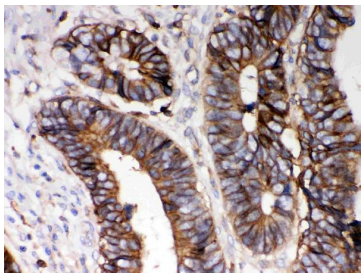
HLA-A Antibody (R31867)

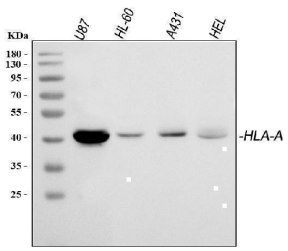
Catalog No.	Formulation	Size
R31867	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P01892
Applications	Western blot: 0.1-0.5ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml
Limitations	This HLA-A antibody is available for research use only.



IHC testing of FFPE human intestinal cancer with HLA-A antibody. HIER: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to staining.



HLA-A Antibody / MHC Class I Antigen Antibody Multi-Cell Line WB. Western blot analysis of 1) human U87, 2) human HL-60, 3) human A431, and 4) human HEL whole cell lysates using HLA-A Antibody / MHC Class I Antigen Antibody. A specific immunoreactive band is detected at approximately 41 kDa in each cell line, consistent with the predicted molecular weight of HLA-A. These results demonstrate reliable detection of HLA-A, a major histocompatibility complex class I molecule involved in antigen presentation to CD8-positive T cells.

Description

HLA-A Antibody recognizes HLA-A, a classical major histocompatibility complex (MHC) class I molecule that plays a central role in adaptive immunity by presenting endogenous peptide antigens to CD8-positive cytotoxic T lymphocytes. HLA-A is expressed on the surface of nearly all nucleated cells and is essential for immune surveillance against viral infections, intracellular pathogens, and malignant transformation. As one of the most extensively studied human leukocyte antigens, HLA-A Antibody is widely used to investigate antigen presentation, immune recognition, transplantation biology, and tumor immunology.

HLA-A consists of a polymorphic alpha heavy chain that associates non-covalently with beta-2 microglobulin to form a functional peptide-presenting complex. Intracellular proteins are processed into short peptides that bind within the HLA-A peptide-binding groove before being transported to the cell surface for recognition by CD8-positive T cells. This antigen presentation pathway enables the immune system to distinguish healthy cells from those infected by viruses or altered through oncogenic transformation, thereby initiating targeted cytotoxic immune responses.

Altered HLA-A expression has significant clinical implications in organ and hematopoietic stem cell transplantation, autoimmune disease, infectious disease, and cancer. Many tumors reduce HLA-A expression to evade immune detection, whereas increased expression is frequently observed following interferon stimulation and during inflammatory responses. HLA-A typing remains a cornerstone of donor-recipient matching for transplantation, while assessment of HLA-A expression has become increasingly important in studies of immune checkpoint blockade, cancer immunotherapy, and mechanisms of immune escape.

NSJ Bioreagents' HLA-A Antibody supports investigations into antigen presentation, MHC class I biology, transplantation immunology, tumor immune surveillance, antiviral immunity, and T cell-mediated immune responses. Reliable detection of HLA-A enables researchers to study one of the principal molecules responsible for presenting intracellular antigens to the adaptive immune system.

Application Notes

Optimal dilution of the HLA-A antibody should be determined by the researcher.

Immunogen

Amino acids EYWDGETRKVKAHSQTHRVDLGTLR of human HLA-A were used as the immunogen for the HLA-A antibody.

Storage

After reconstitution, the HLA-A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

HLA-A antibody, Human Leukocyte Antigen A antibody, MHC Class I HLA-A antibody, Major Histocompatibility Complex Class I A antibody, HLA Class I A antibody, HLA-A Heavy Chain antibody

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