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HLA-A Antibody(Center)
Mouse Monoclonal Antibody (Mab)
Catalog # AM1843b

Specification

HLA-A Antibody(Center) - Product Information

Application	**WB,E**
Primary Accession	P04439
Other Accession	P16188, P13746
Reactivity	**Mouse**
Predicted	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1,lg**
Calculated MW	**40841**
Antigen Region	**70-99**

HLA-A Antibody(Center) - Additional Information

Gene ID 3105

Other Names
HLA class I histocompatibility antigen, A-3 alpha chain, MHC class I antigen A*3, HLA-A, HLAA

Target/Specificity
This HLA-A antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 70-99 amino acids from the Central region of human HLA-A.

Dilution
WB~~1:500~1000

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

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-A Antibody(Center) is for research use only and not for use in diagnostic or therapeutic procedures.

HLA-A Antibody(Center) - Protein Information

Name HLA-A (HGNC:4931)

Synonyms HLAA

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-A-restricted CD8-positive T cells, guiding antigen-specific T cell immune response to eliminate infected or transformed cells (PubMed:2456340, PubMed:2784196, PubMed:1402688, PubMed:7504010, PubMed:9862734, PubMed:10449296, PubMed:12138174, PubMed:12393434, PubMed:15893615, PubMed:17189421, PubMed:19543285, PubMed:21498667, PubMed:24192765, PubMed:7694806, PubMed:24395804, PubMed:28250417). 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:25880248, PubMed:7506728, PubMed:7679507). 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:12796775, PubMed:18275829, PubMed:19542454, PubMed:28250417). Typically presents intracellular peptide antigens of 8 to 13 amino acids that arise from cytosolic proteolysis via IFNG-induced immunoproteasome or via endopeptidase IDE/insulin-degrading enzyme (PubMed:17189421, PubMed:20364150, PubMed:17079320, PubMed:26929325, PubMed:27049119). Can bind different peptides containing allele- specific binding motifs, which are mainly defined by anchor residues at position 2 and 9 (PubMed:7504010, PubMed:9862734).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein

Tissue Location
Ubiquitous..

HLA-A Antibody(Center) - 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

HLA-A Antibody(Center) - Images

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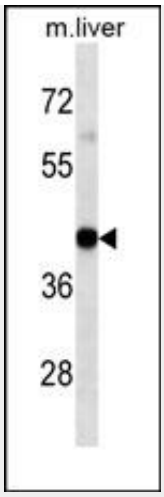

HLA-A Antibody western blot analysis in mouse Liver tissue lysates (35µg/lane).This demonstrates the HLA-A antibody detected the HLA-A protein (arrow).

HLA-A Antibody(Center) - Background

HLA-A 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, exons 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-A alleles have been described.

HLA-A Antibody(Center) - References

HLA Class I and Genetic Susceptibility to Type 1 Diabetes: Results from the Type 1 Diabetes Genetics Consortium. Noble JA, et al. Diabetes, 2010 Aug 26. PMID 20798335. Effect of HLA Class I and Class II Alleles on Progression from Autoantibody Positivity to Overt Type 1 Diabetes in Children with Risk-Associated Class II Genotypes. Lipponen K, et al. Diabetes, 2010 Aug 25. PMID 20739684. Infectious mononucleosis-linked HLA class I single nucleotide polymorphism is associated with multiple sclerosis. Jafari N, et al. Mult Scler, 2010 Aug 24. PMID 20736246. [Associations of Human Leukocyte Antigen-A, B, DRB1 Genes with Leukemia Patients in Anhui Province of China.] Liao YQ, et al. Zhongguo Shi Yan Xue Ye Xue Za Zhi, 2010 Jul. PMID 20723328. Longer survival associated with HLA-A*03, B*14 among 212 hemochromatosis probands with HFE C282Y homozygosity and HLA-A and -B typing and haplotyping. Barton JC, et al. Eur J Haematol, 2010 Aug 14. PMID 20722701.