abcam

ab93528

Biotin Anti-MHC class I antibody [AF6-88.5.5.3]

Anti-MHC class I antibody [AF6-88.5.5.3] conjugated to Biotin - suitable for flow cytometry, and reacts with mouse samples. Clone [AF6-88.5.5.3] is a mouse monoclonal antibody cited in 32 publications.

Key facts

Isotype	IgG2a
Host species	Mouse
Conjugation	Biotin
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing H2-K1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P03991
Clone number	AF6-88.5.5.3
Purification technique	Affinity purification
Specificity	Reacts with the H-2Kb MHC class I alloantigen. Reactivity to other haplotypes (e.g. d, f, j, k, p, q, r, s, u, and v) has not been observed.
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse

Dilution info	0.06 µg for 10^5-10^8 Cells
Notes	ab97679 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Target data

See full target information H2-K1

Function	Involved in the presentation of foreign antigens to the immune system.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	MHC class I also known as MHC-1 or simply MHC I is a molecule playing an important role in the immune system. The molecule is a heterodimer composed of a heavy chain weighing around 45 kDa and a light chain. MHC class I molecules are expressed on nearly all nucleated cells in the body. They present peptide fragments from intracellular proteins to CD8+ T cells helping the immune system recognize and destroy infected or cancerous cells. Alternate names like H-2Kd/H-2Dd in mice highlight its role in antigen presentation across different species.
Biological function summary	The molecules of MHC class I form part of the adaptive immune system. They act as a complex with peptides which are derived from proteins degraded by the proteasome. The peptide-MHC I complex travels to the cell surface where it engages with the T cell receptor (TCR) on cytotoxic T cells. This interaction is essential for immune surveillance ensuring the body identifies cells that might compromise health such as those infected by viruses or transformed malignantly.
Pathways	The function of MHC class I integrates into the antigen processing and presentation pathways. It is pivotal in the proteasome-dependent pathway for

	processing endogenous antigens. Proteins like TAP (transporter associated with antigen processing) assist in transporting peptides into the endoplasmic reticulum for loading onto MHC class I. This pathway is central to cellular immunity and intersects with various immune response cascades.
Associated diseases and disorders	MHC class I has associations with autoimmune disorders and certain viral infections. Aberrant expression or mutations can lead to diseases like Ankylosing Spondylitis or impact responses to chronic viral infections such as HIV. The involvement of MHC class I in presenting viral peptides often links it to immune evasion mechanisms utilizable by viruses. Hence this protein works closely with immune system proteins like cytokines influencing disease outcomes.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

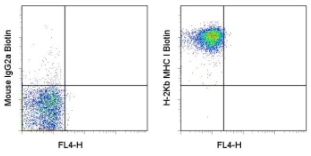
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Flow Cytometry - Biotin Anti-MHC class I antibody [AF6-88.5.5.3] (ab93528)

MHC class I Flow Cytometry staining using mouse Anti-MHC class I antibody

Staining of C57Bl/6 splenocytes with 0.06µg of biotin Mouse IgG2a, K Isotype control (left) or 0.06 µg of ab93528(right), followed by Streptavidin-PE.

Total viable cells were used for analysis.

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