abcam

ab72487

Anti-MHC Qa1b antibody [6A8.6F10.1A6]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Clone number	6A8.6F10.1A6
Purification technique	Affinity purification Protein G
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1-2 µg/mL
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	0.1-0.5 µg/mL for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information MHC Qa1b

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

ab72487 can be used for flow cytometric assay to detect Qa1b on immuno-regulatory antigen presenting cells and activated splenic T cells on Qa1b expressing mice (e.g. BALB/c, C57BL/6) and it can also be used for functional assays to block target cell recognition by CTLs specific for Qa1 restricted antigen presentation and other functional study where Qa1b associated immuno-regulation may work.

Supplementary info

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

Activity summary	MHC Qa1b also known as Qa-1b is a non-classical MHC class Ib molecule. It weighs approximately 45 kDa and belongs to the MHC class I family. Qa-1b is mainly expressed on the surface of lymphocytes as well as other nucleated cells. Its primary function includes the presentation of peptide antigens to CD8+ T cells facilitating immune surveillance. Qa-1b molecules possess a restricted tissue distribution compared to classical MHC molecules which makes them unique in their function and expression.

Biological function summary	Qa-1b plays an essential role in modulating immune responses. It interacts as a ligand with CD94/NKG2 receptors on natural killer (NK) cells and some T cells impacting the regulation of these cells' activity. Through this interaction Qa-1b contributes to the inhibition or activation of NK cells influencing immune tolerance and the immune system's response to infected or transformed cells. Qa-1b as part of a larger complex associates with β2-microglobulin to form a stable structure on the cell surface essential for its antigen-presenting function.
Pathways	Qa-1b contributes significantly to both the innate and adaptive immune pathways. By acting within the antigen presentation and NK cell activity pathways Qa-1b cooperates with other molecules involved in immune regulation such as MHC class I molecules and immunoreceptors like CD94/NKG2. This collaboration ensures proper immune system function by maintaining balance between immune surveillance and self-tolerance preventing autoimmunity.
Associated diseases and disorders	Qa-1b has a potential connection to autoimmune diseases and cancer. Its role in maintaining immune tolerance makes it a critical factor in conditions like rheumatoid arthritis where immune regulation is disrupted. Qa-1b's interaction with CD94/NKG2 receptors can also influence tumor immunity as it might help cancer cells evade immune detection. Understanding Qa-1b's function and interactions with other proteins in these contexts is important for developing therapeutic approaches targeting these diseases.

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

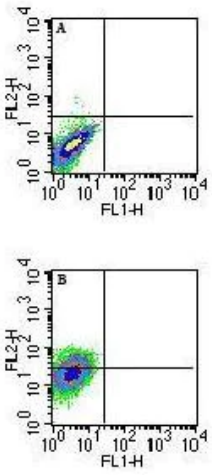
We do not recommend this combination. It is not covered by our product promise.

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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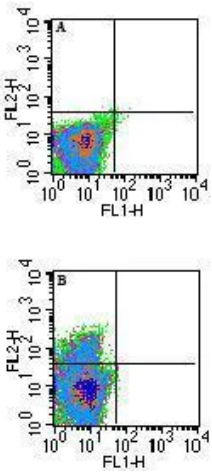
3 product images



Flow Cytometry - Anti-MHC Qa1b antibody [6A8.6F10.1A6] (ab72487)

MHC Qa1b Flow Cytometry staining using mouse Anti-MHC Qa1b antibody

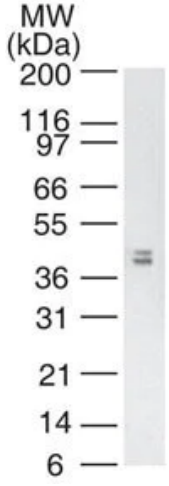
Flow cytometric analysis of MHC Qa1b in 72 hour ConA-stimulated Balb/c mouse splenocytes using A) isotype control and B) ab72487 (with an anti-mouse IgG1-PE secondary) at 0.25 ug/10^6 cells. A shift is seen in the entire population of cells.



Flow Cytometry - Anti-MHC Qa1b antibody [6A8.6F10.1A6] (ab72487)

MHC Qa1b Flow Cytometry staining using mouse Anti-MHC Qa1b antibody

Flow cytometric analysis of MHC Qa1b in unstimulated Balb/c mouse splenocytes using A) isotype control and B) ab72487 (with an anti-mouse IgG1-PE secondary) at 0.25 ug/10^6 cells. A shift is seen in only a small percentage of cells.



Western blot - Anti-MHC Qa1b antibody [6A8.6F10.1A6] (ab72487)

MHC Qa1b Western blot staining using mouse Anti-MHC Qa1b antibody

Western blot analysis of mouse thymus tissue lysate using ab72487 at 2 µg/ml.
All lanes:
Western blot - Anti-MHC Qa1b antibody [6A8.6F10.1A6] (ab72487)

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