abcam

ab25244

Anti-MHC Class 1 H2 Db/H2-D1 antibody [27-11-13]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 8.2 Constituents: 100% Borate buffered saline
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing MHC Class 1 H2 Db/H2-D1 protein. The exact immunogen used to generate this antibody is proprietary information.
Clone number	27-11-13
Specificity	ab25244 recognizes the a3 domain of H2Db class I MHC antigen. The antibody cross-reacts with the a3 domain of H2Ld, H2Dq and H2Lq, but not H2Kd or H2Dd. Reactivity with haplotypes k, f, p, r, and s has not been observed.
Epitope	Recognizes an epitope on the a chain of H2Db.
Light chain type	kappa
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Mouse

Dilution info	-
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

FuncS

Expected

Species	Mouse
Dilution info	-
Notes	Complement-dependent cytoxicity assay.

IHC-Fr

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information H2-D1

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
Aliquoting information	Upon delivery aliquot

Storage information	Avoid freeze / thaw cycle

Notes

ab25244 can be used for complement-dependent cytoxicity assays.

REACH authorisation

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Supplementary info

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

Activity summary	The MHC Class I H2-D1 also known as H2-Db is an important protein within the major histocompatibility complex. This protein carries a molecular mass of approximately 45 kDa. H2-Db is expressed on the surface of almost all nucleated cells. As a protein it plays an important role in immune response by presenting peptide antigens to cytotoxic T cells. Other similar proteins like H2-Kb and H2-Kd are also involved in antigen presentation though each has distinct peptide binding preferences.
Biological function summary	The MHC Class I H2-Db interacts with peptides derived from cytosolic proteins and loads them onto its structure. It forms a complex with beta-2 microglobulin and presents these peptides on the cell surface. This action is essential in signaling to CD8+ T cells which scan for non-self peptides originating from infections or cellular abnormalities. The method by which H2-Db binds peptides ensures precise immune surveillance.
Pathways	H2-Db operates prominently in the antigen processing and presentation pathway. This pathway plays an important role in immune response and involves proteases that generate peptide fragments. H2-Db interacts with transporter associated with antigen processing (TAP) proteins to bind peptides enabling effective display of antigens. Furthermore its activity connects with other immune proteins such as H2-Kb in presenting a comprehensive range of antigens to immune cells.
Associated diseases and disorders	The involvement of H2-Db in autoimmune diseases and viral infections is significant. Certain autoimmune conditions arise when self-antigens are mistakenly presented triggering an immune response. Infections like viral hepatitis show how pathogens can manipulate H2-Db to evade immune detection. Tumor cells may also exploit H2-Db's antigen-presenting function. Proteins such as H2-Kb may interact similarly highlighting the need for MHC Class I diversity in combating disease.

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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Terms & Conditions.

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