abcam

ab25028

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

Anti-MHC Class 1 H2 Db/H2-D1 antibody [27-11-13] conjugated to FITC - suitable for flow cytometry, and reacts with mouse samples. Clone [41605] is a mouse monoclonal antibody.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG2a
Host species	Mouse
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
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
Purification technique	Affinity purification
Specificity	ab25028 recognizes with the a3 domain of H-2Db class I MHC (H2-D1) antigen. The antibody cross-reacts with the a3 domain of H-2Ld, H-2Dq and H-2Lq, but not H-2Kd or H-2Dd. Reactivity with haplotypes k, f, p, r, and s has not been observed.
Epitope	An epitope on the a chain of H-2Db
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

Tested

Species	Mouse
Dilution info	1 µg for 10^6 Cells
Notes	ab18455 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

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 conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

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

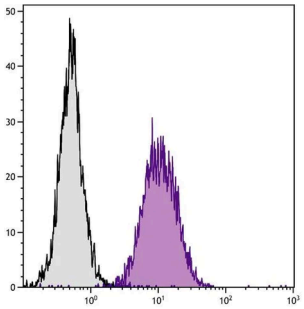
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry - FITC Anti-MHC Class 1 H2 Db/H2-D1 antibody [27-11-13] (ab25028)

MHC Class 1 H2 Db/H2-D1 Flow Cytometry staining using mouse Anti-MHC Class 1 H2 Db/H2-D1 antibody

Mouse C57BL/6 splenocytes stained for MHC Class 1 H2 Db/H2-D1 using ab25028 at 1 µg/10^6 cells in flow cytometric analysis.

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