abcam

## ab25547

# PE 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 PE - 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** | PE |
| **Excitation/Emission** | Ex: 480;565nm, Em: 578nm |
| **Storage buffer** | pH: 7.3 Preservative: 0.09% Sodium azide Constituents: PBS, 16% Sucrose |
| **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** | ab25547 recognizes the alpha3 domain of H-2Db class I MHC antigen. The antibody cross-reacts with the alpha3 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** | This antibody reacts with an epitope on the alpha chain [alpha3 domain] of H2Db. |
| **Light chain type** | kappa |
| **Concentration** | 0.1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 0.2 µg for $10^6$ Cells |
| **Notes** | - |

## Target data

See full target information H2-D1

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

## Storage

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|---|---|
| **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.

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|---|---|
| **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.

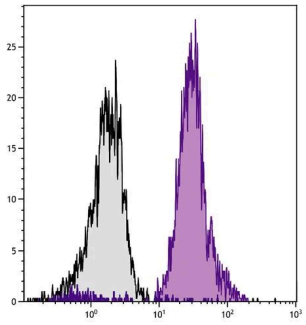
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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## 1 product image



### Flow Cytometry - PE Anti-MHC Class 1 H2 Db/H2-D1 antibody [27-11-13] (ab25547)

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

Flow cytometric analysis of mouse BALB/c mouse splenocytes stained for MHC Class 1 H2 Db/H2-D1 using ab25547 at 0.2 µg/$10^6$ cells.

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