abcam

ab139365

Anti-MHC Class II antibody [M5/114]

Anti-MHC Class II antibody [M5/114] (ab139365) is a rat monoclonal antibody detecting MHC Class II in **Western Blot, Flow Cytometry, IP, FuncS, BL**. Suitable for **Mouse**.

Key facts

Isotype	IgG2b
Host species	Rat
Storage buffer	pH: 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing H2-Ea protein. The exact immunogen used to generate this antibody is proprietary information. Database link P01904
Carrier free	Yes
Clone number	M5/114
Purification technique	Affinity purification Protein G
Specificity	ab139365 reacts with murine MHC class II glycoproteins. It recognizes a shared determinant on I-Ab, I-Ad, I-Aq, and I-Ed, I-Ek alloantigens, but it does not react with I-Af, I-Ak, I-As. ab139365 can inhibit I-A-restricted T cell responses of the H-2b, H-2d, H-2q, H-2u but not H-2f, H-2k, H-2s haplotypes.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purity is > 95% by SDS-PAGE and 0.2 µm filter sterilized.

Reactivity data

IP

Expected

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

Flow Cyt

Tested

Species	Mouse
Dilution info	2 µg/mL
Notes	ab18536 - Rat monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

WB

Expected

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

FuncS (Neut/Block)

Expected

Species	Mouse
Dilution info	-
Notes	Blocking of T cell proliferative responses.

Target data

See full target information H2-Eb1

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

Notes

What is this antibody validated in?
Anti-MHC Class II antibody [M5/114] (ab139365) is a rat monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunoprecipitation (IP), Functional Studies, Blocking in Mouse samples.

Supplementary info

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

Activity summary	MHC Class II also known as MHC II or human leukocyte antigen (HLA) class II is a protein complex with a molecular mass generally around 55 kDa. This protein is mainly expressed on the surface of antigen-presenting cells such as dendritic cells macrophages and B cells. It plays an important role in the immune system by presenting extracellular antigens to T helper cells. MHC II molecules are composed of two polypeptide chains alpha and beta which associate to form a heterodimer on the cell surface.
Biological function summary	MHC Class II molecules facilitate the immune system's recognition and response to pathogens by presenting processed antigenic peptides to CD4+ T lymphocytes. This activity involves their assembly within the endosomal-lysosomal system where they bind peptides derived from endocytosed proteins. MHC II is part of the major histocompatibility complex which includes other related molecules such as MHC Class I (HLA class I). The binding and presentation of peptides are central for the coordination of adaptive immune responses enhancing pathogen clearance and maintaining immunological memory.
Pathways	MHC Class II operates within the antigen processing and presentation pathway important for adaptive immunity. Its interaction with CD4+ T cells stimulates downstream signaling pathways leading to T cell activation and differentiation. Related proteins in the antigen presentation pathway include invariant chain (Ii) which guides MHC II to the endosome and HLA-DM which facilitates peptide loading. Together these proteins and pathways work to ensure effective immune surveillance and response.

Associated diseases and disorders	Alterations in MHC Class II expression or function are associated with autoimmune diseases such as rheumatoid arthritis and type 1 diabetes. In these conditions improper antigen presentation may lead to an inappropriate immune response against self-proteins. The involvement of MHC II in disease is often linked to specific HLA alleles which vary among individuals and influence susceptibility to autoimmune disorders. Additionally the abnormal function of connected proteins like cytokines from activated T helper cells can exacerbate these immune conditions.

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

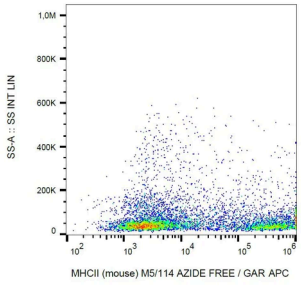
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Flow Cytometry - Anti-MHC Class II antibody [M5/114] (ab139365)

MHC Class II Flow Cytometry staining of Mouse splenocytes using rat Anti-MHC Class II antibody

Flow cytometry analysis (surface staining) of MHCII on murine splenocytes with ab139365.

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