abcam

ab239229

FITC Anti-MHC Class II antibody [M5/114]

Anti-MHC Class II antibody [M5/114] conjugated to FITC - suitable for flow cytometry, and reacts with mouse samples. Clone [M5/114] is a rat monoclonal antibody cited in 11 publications.

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Key facts

Isotype	IgG2b
Host species	Rat
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.0975% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Ciita protein. The exact immunogen used to generate this antibody is proprietary information. Database link P79621
Clone number	M5/114
Purification technique	Size-exclusion chromatography
Specificity	The rat monoclonal antibody M5/114 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. This antibody 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	The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC.

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	2-3 µg/mL
Notes	-

Target data

See full target information H2-Eb1

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze, Store in the dark

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

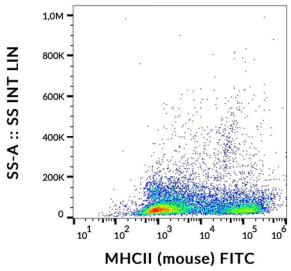
We do not recommend this combination. It is not covered by our product promise.

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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 - FITC Anti-MHC Class II antibody [M5/114] (ab239229)

MHC Class II Flow Cytometry staining using rat Anti-MHC Class II antibody

Surface staining of MHCII on murine splenocytes with ab239229 at 4 µg/ml in flow cytometric analysis.

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