abcam

ab129721

PE Anti-Bovine MHC Class II DQ antibody [CC158]

Anti-Bovine MHC Class II DQ antibody [CC158] conjugated to PE - suitable for flow cytometry, and reacts with cattle samples. Clone [CC158] is a mouse monoclonal antibody cited in 5 publications.

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Key facts

Isotype	IgG2a
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 5% Sucrose, 1% BSA
Form	Liquid
Clonality	Monoclonal
Clone number	CC158
Purification technique	Affinity purification Protein G
Purification notes	Purified from tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Cow
Dilution info	1/1

Notes	Use 10ul of the suggested working dilution to label 1x10^6 cells in 100ul.

Target data

See full target information Bovine MHC Class II DQ

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Supplementary info

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

Activity summary	Bovine Major Histocompatibility Complex (MHC) Class II DQ also known as bovine DQ is an important component of the immune system in cattle. These molecules are type of glycoproteins and their mass ranges approximately 26-28 kDa depending on the specific alpha and beta chains involved. MHC Class II DQ molecules are expressed mainly on professional antigen-presenting cells such as dendritic cells macrophages and B cells. They play an important role in presenting exogenous antigens to CD4+ T-helper cells which is critical for immune response activation.
Biological function summary	MHC Class II DQ molecules in cattle anchor the immune defense against extracellular pathogens. They form a heterodimer consisting of an alpha and a beta chain which is essential for its antigen-presenting function. The heterodimer binds processed peptide fragments derived from pathogens displaying them on the cell surface to T-helper cells. By doing so they enable the recognition and initiation of specific immune responses which is a pivotal step in adaptive immunity.
Pathways	The MHC Class II DQ molecules are active participants in the antigen processing and presentation pathway. This pathway is essential in facilitating communication between the innate and adaptive immune systems. The presentation of antigens through MHC Class II is closely associated with the T-cell receptor signaling pathway. Proteins such as CD4 and the T-cell receptor are directly involved in recognizing and binding to the antigen-MHC complex on antigen-presenting cells. These interactions trigger downstream signaling cascades leading to T-cell activation and differentiation.

Associated diseases and disorders	MHC Class II DQ molecules in bovines have associations with bovine respiratory disease complex and Johne's disease. Genetic variations in the DQ region can influence susceptibility to these diseases. The interaction with pathogenic antigens and the effectiveness of the overall immune response can vary with different DQ alleles. In Johne's disease for example Mycobacterium avium subspecies paratuberculosis may evade immune response partly by exploiting specific MHC Class II DQ interactions indicating that these molecules play a role in disease pathogenesis.

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

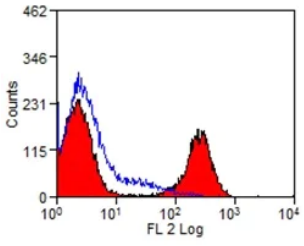
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - PE Anti-Bovine MHC Class II DQ antibody [CC158] (ab129721)

Bovine MHC Class II DQ Flow Cytometry staining using mouse Anti-Bovine MHC Class II DQ antibody

ab129721, undiluted staining Bovine MHC Class II DQ in Bovine Peripheral Blood lymphocytes by Flow Cytometry.

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