abcam

ab270760

Anti-MICB antibody [B-D54] - BSA and Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.3 - 7.5 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human MICB aa 1-300. The exact immunogen used to generate this antibody is proprietary information. Database link Q29980
Carrier free	Yes
Clone number	B-D54
Purification technique	Affinity purification Protein A
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µL for 10^6 Cells
Notes	-

Target data

See full target information MICB

Function	Widely expressed membrane-bound protein which acts as a ligand to stimulate an activating receptor KLRK1/NKG2D, expressed on the surface of essentially all human natural killer (NK), gammadelta T and CD8+ alphabeta T-cells (PubMed:11491531, PubMed:11777960). Up-regulated in stressed conditions, such as viral and bacterial infections or DNA damage response, serves as signal of cellular stress, and engagement of KLRK1/NKG2D by MICA triggers NK-cells resulting in a range of immune effector functions, such as cytotoxicity and cytokine production.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	Up to 12 months
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

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

Activity summary	MICB also known as MHC class I polypeptide-related sequence B is a protein with a molecular weight of around 42 kDa. It anchors on cell surfaces and is widely expressed in epithelial cells fibroblasts and monocytes. MICB surfaces on stressed cells but remains minimal in normal conditions indicating its involvement in cell stress response. It is an activating ligand for NKG2D receptor on natural killer (NK) cells and certain T cells playing a major role in immune surveillance.
Biological function summary	MICB contributes to immune system functioning by presenting stress-induced antigens to immune cells. It does not belong to a complex but engages in interactions critical for activating cytotoxic responses. By binding to the NKG2D receptor it helps activate NK cells and certain T cell subsets which results in the elimination of damaged or transformed cells. This immune activation is important for the surveillance against cancer and infected cells maintaining tissue homeostasis.

Pathways	MICB plays a role in the stress-induced NKG2D signaling pathway and is involved in the immune response pathway. It cooperates with proteins such as NKG2D and MICA another ligand of the NKG2D receptor to initiate immune cell-mediated cytotoxicity. These pathways activate NK cells and CD8+ T cells important for removing stressed or altered cells thereby influencing the body's defense mechanisms.
Associated diseases and disorders	MICB has connections to cancer and autoimmune disorders. Aberrant expression of MICB appears in tumors affecting tumor immune evasion and associates with autoimmune diseases influencing immune tolerance. Dysregulation of MICB activity can affect interactions with proteins like NKG2D altering immune responses and contributing to disease progression. Therefore understanding MICB's role is critical for developing therapeutic interventions targeting immune-related diseases.

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

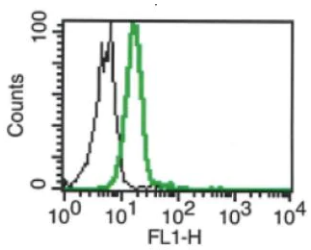
We do not recommend this combination. It is not covered by our product promise.

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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1 product image



Flow Cytometry - Anti-MICB antibody [B-D54] - BSA and Azide free (ab270760)

MICB Flow Cytometry staining using mouse Anti-MICB antibody

Flow cytometric analysis of Jurkat cells labeling MICB using ab270760 (Green). Isotype control (Black).

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