abcam

ab278536

Anti-MICA antibody [3H5] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Carrier free	Yes
Clone number	3H5
Purification technique	Affinity purification Protein A
Concentration	1.002 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ELISA

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information MICA

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 (PubMed:10426993).

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

Notes

ab278536 is the carrier-free version of ab278534.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	MICA also known as MHC class I polypeptide-related sequence A is a protein encoded by the MICA gene. It has a molecular weight of approximately 62 kDa. MICA is a stress-induced ligand expressed on the surface of various cell types including epithelial cells fibroblasts and some tumor cells. This protein is part of the MHC class I chain-related (MIC) family which plays an important role in the immune system by interacting with natural killer (NK) cells and certain T cells.
Biological function summary	The MICA protein acts as a ligand for the NKG2D receptor an activating receptor found on NK cells and some T-cell subsets. MICA does not require expression as part of a complex with β2-microglobulin for function. When cells express MICA they signal distress allowing immune cells to target and destroy potentially harmful cells such as those infected with viruses or transformed into cancer cells. This interaction is an important component of the immune surveillance system.
Pathways	MICA functions within the natural cytotoxicity effector pathway heavily involved in immune responses. It is also relevant in the DNA damage response pathways. Within these pathways MICA interacts with proteins like NKG2D and plays a part in mediating cellular responses to stress and damage. These interactions enhance the capacity of immune cells to recognize and eliminate abnormal cells.
Associated diseases and disorders	MICA is associated with conditions such as psoriasis and certain types of cancer. Studies have shown increased levels of soluble MICA in the sera of patients with psoriasis indicating a role in inflammation. Additionally in cancer MICA expression affects tumor immunity connecting to the NKG2D receptor to influence immune cell targeting and destruction of tumor cells. Researchers use tools such as MICA ELISA kits and imaging techniques to study its role in these 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

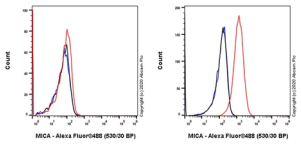
We do not recommend this combination. It is not covered by our product promise.

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.

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

2 product images

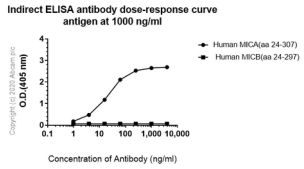


Flow Cytometry - Anti-MICA antibody [3H5] - BSA and Azide free (ab278536)

MICA Flow Cytometry staining using mouse Anti-MICA antibody

This data was developed using ab278534 the same antibody clone in a different buffer formulation.
Flow cytometric analysis of Jurkat (Human T cell leukemia T lymphocyte, Left) / HeLa (Human cervix adenocarcinoma epithelial cell, Right) cells labelling MICA with ab278534 at 1/1000 dilution (0.1µg) (Red) compared with a Mouse monoclonal IgG (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti mouse IgG (Alexa Fluor® 488, ab150113) at 1/2000 dilution was used as the secondary antibody.

Negative control: Jurkat.



ELISA - Anti-MICA antibody [3H5] - BSA and Azide free (ab278536)

This data was developed using ab278534 the same antibody clone in a different buffer formulation.
Human MICA（aa 24-307) and Human MICB（aa 24-297）= 1000 ng/ml

ab278534 used at 0 - 4000 ng/ml.

Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Mouse IgG (H+L）secondary antibody was used at 1:1000 dilution.

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