abcam

ab316967

Anti-MNDA antibody [EPR28267-44]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR28267-44
Purification technique	Affinity purification Protein A
Concentration	0.509 - 0.526 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information MNDA

Function	May act as a transcriptional activator/repressor in the myeloid lineage. Plays a role in the granulocyte/monocyte cell-specific response to interferon. Stimulates the DNA binding of the transcriptional repressor protein YY1.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot

Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Supplementary info

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

Activity summary	MNDA known as Myeloid Cell Nuclear Differentiation Antigen has a mass of approximately 45 kDa. Expression occurs mainly in myeloid cells including monocytes and granulocytes. It is encoded by the MNDA gene situated on chromosome 1q22. MNDA belongs to the HIN-200 family of proteins which are involved in various cellular activities. The protein contains a DNA-binding domain suggesting its role in transcriptional regulation.
Biological function summary	The function of MNDA is critical for the immune response and cellular differentiation. MNDA participates in regulating gene transcription in response to external stimuli. It operates in complex with other nuclear proteins to modulate the immune and inflammatory response aiming for a precise cellular behavior. MNDA's presence in myeloid cells signifies its role in the innate immune system contributing significantly to cell maturation and defense mechanisms.
Pathways	MNDA influences gene expression modifications tied to key immune response pathways. It has a noted involvement in the Toll-like receptor (TLR) signaling pathway where it helps mediate responses to pathogens. MNDA interacts with proteins such as TLR4 which plays a vital role in innate immunity. Furthermore MNDA participates in the interferon regulatory factor (IRF) pathway impacting type I interferon production and immune regulation.
Associated diseases and disorders	MNDA has associations with myeloid malignancies and autoimmune conditions. Abnormal expression or mutation of MNDA might contribute to disease pathology in acute myeloid leukemia (AML) where it may function alongside proteins like RUNX1 a transcription factor important in hematopoiesis. Additionally MNDA expressions and mutations link to systemic lupus erythematosus (SLE) where its regulatory impact on the immune response may be disrupted influencing inflammatory pathways and immune system regulation.

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

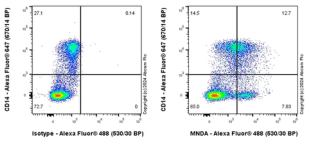
We do not recommend this combination. It is not covered by our product promise.

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.

8 product images

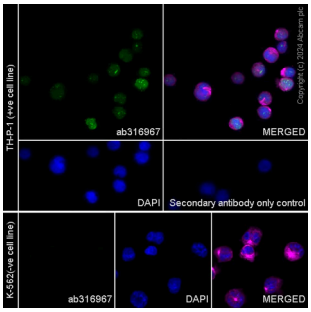


Flow Cytometry (Intracellular) - Anti-MNDA antibody [EPR28267-44] (ab316967)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized Human PBMC (human peripheral blood mononuclear cell) cells labelling MNDA with ab316967 at 1/500 dilution (0.1ug)/right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control.

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells were stained with anti-CD14 conjugated to Alexa Fluor®647. Fixed with 2% PFA for 10 min followed by intracellularly staining with rabbit IgG or EPR28267-44



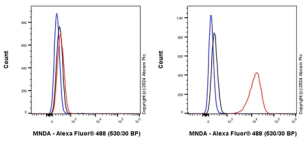
Immunocytochemistry/ Immunofluorescence - Anti-MNDA antibody [EPR28267-44] (ab316967)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized THP-1(human monocytic leukemia monocyte) cells labelling MNDA with ab316967 at 1/50 (10.2 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/mL) dilution (Green).

Confocal image showing nuclear staining in THP-1 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labeled with DAPI (shown in blue).
Negative control: K-562 (PMID: 12112016).
Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 ug/mL) dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/mL) dilution.

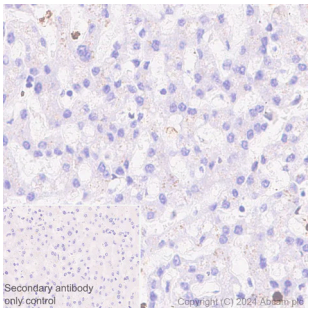


Flow Cytometry (Intracellular) - Anti-MNDA antibody [EPR28267-44] (ab316967)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized THP-1 (human monocytic leukemia monocyte) / right and K-562 (human chronic myelogenous leukemia lymphoblast) / left cells labelling MNDA with ab316967 at 1/500 dilution (0.1ug)/(Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Negative control: K-562 (PMID: 12112016)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MNDA antibody [EPR28267-44] (ab316967)

MNDA Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human liver using rabbit Anti-MNDA antibody

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling MNDA with ab316967 at 1/100 (5.1 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

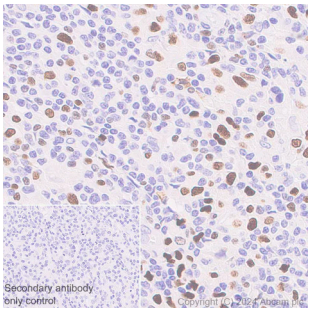
Low expression tissue: Scattered staining of immune cells in the human liver.
The section was incubated with ab316967 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MNDA antibody [EPR28267-44] (ab316967)

Immunohistochemical analysis of paraffin-embedded Human hodgkin's lymphoma tissue labeling MNDA with ab316967 at 1/100 (5.1 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

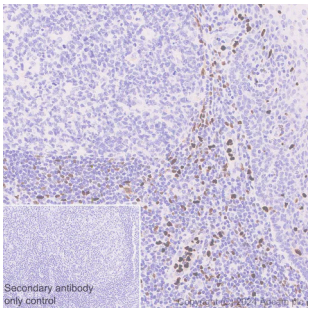
Positive staining in human hodgkin's lymphoma.
The section was incubated with ab316967 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MNDA antibody [EPR28267-44] (ab316967)

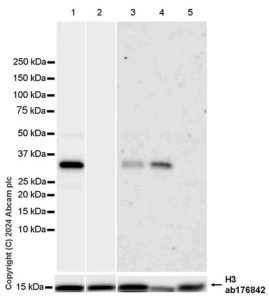
Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling MNDA with ab316967 at 1/100 (5.1 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining in human tonsil.
The section was incubated with ab316967 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Western blot - Anti-MNDA antibody [EPR28267-44] (ab316967)

MNDA Western blot staining using rabbit Anti-MNDA antibody

Negative control: Jurkat

Low expression: liver

In Western blot, Anti-Histone H3 antibody [EPR16987] - Nuclear Marker and ChIP Grade (ab176842) staining at 1/100000 dilution.

Exposure time: Lane1-2: 15seconds, lane3-5: 180 seconds

All lanes:
Western blot - Anti-MNDA antibody [EPR28267-44] (ab316967) at 1/1000 dilution

Lane 1:
U-937 (human histiocytic lymphoma monocyte) whole cell lysate at 20 µg

Lane 2:
Jurkat (human t cell leukemia t lymphocyte from peripheral blood) whole cell lysate at 20 µg

Lane 3:
Human spleen tissue lysate at 20 µg

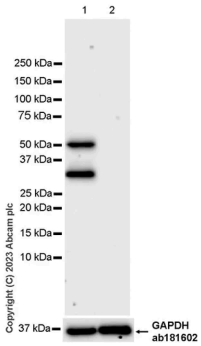
Lane 4:
Human tonsil tissue lysate at 20 µg

Lane 5:
Human liver tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 27 kDa, 15 kDa



Western blot - Anti-MNDA antibody [EPR28267-44] (ab316967)

MNDA Western blot staining using rabbit Anti-MNDA antibody

Negative control: K-562(PMID:12112016)

The lysates were freshly made and used for Western Blotting immediately to minimize protein degradation.

MNDA (full-length 55 kDa), cleaved fragments (27 kDa) are observed

The molecular weight observed is consistent with what has been described in the literature(PMID: 20395555)

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-MNDA antibody [EPR28267-44] (ab316967) at 1/1000 dilution

Lane 1:
THP-1 (human monocytic leukemia monocyte) whole cell lysate at 20 µg

Lane 2:
K-562 (human chronic myelogenous leukemia lymphoblast) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 27 kDa, 55 kDa, 36 kDa

Exposure time: 37s

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