abcam

ab316185

Anti-DMBT1 antibody [EPR25722-10]

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	EPR25722-10
Purification technique	Affinity purification Protein A
Concentration	0.484 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Recombinant fragment - Human
Dilution info	1/1000
Notes	-

Species	Human

Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Recombinant fragment - Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse, Rat, Recombinant fragment - Human
Dilution info	-

Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

Target data

See full target information DMBT1

Function

May be considered as a candidate tumor suppressor gene for brain, lung, esophageal, gastric, and colorectal cancers. May play roles in mucosal defense system, cellular immune defense and epithelial differentiation. May play a role as an opsonin receptor for SFTPD and SPAR in macrophage tissues throughout the body, including epithelial cells lining the gastrointestinal tract. May play a role in liver regeneration. May be an important factor in fate decision and differentiation of transit-amplifying ductular (oval) cells within the hepatic lineage. Required for terminal differentiation of columnar epithelial cells during early embryogenesis. May function as a binding protein in saliva for the regulation of taste sensation. Binds to HIV-1 envelope protein and has been shown to both inhibit and facilitate viral transmission. Displays a broad calcium-dependent binding spectrum against both Gram-positive and Gram-negative bacteria, suggesting a role in defense against bacterial pathogens. Binds to a range of poly-sulfated and poly-phosphorylated ligands which may explain its broad bacterial-binding specificity.

Inhibits cytoinvasion of S.enterica. Associates with the actin cytoskeleton and is involved in its remodeling during regulated exocytosis. Interacts with pancreatic zymogens in a pH-dependent manner and may act as a Golgi cargo receptor in the regulated secretory pathway of the pancreatic acinar cell.

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	The DMBT1 protein also known as Deleted in Malignant Brain Tumors 1 plays an important role in the human immune response and tissue homeostasis. It has a molecular mass of approximately 340 kDa. The protein expresses in numerous tissues such as the respiratory tract gastrointestinal tract and reproductive organs suggesting its involvement in various physiological processes. DMBT1 expresses abundantly in epithelial cells where it is also secreted into body fluids.

Biological function summary	The DMBT1 protein acts as a pattern recognition receptor (PRR) which means it identifies and binds to pathogen-associated molecular patterns. This function helps in the elimination of pathogens and maintaining mucosal immunity. DMBT1 is not typically part of a larger stable protein complex but it interacts with other PRRs to enhance protective responses. It helps balance between immune defense and inflammation indicating its adaptive role in immunity.
Pathways	The Dmbt1 protein interacts significantly with the immune and inflammatory pathways. It is involved in the Toll-like receptor (TLR) signaling pathway which is important in recognizing microbial components and activating immune responses. Additionally DMBT1 has interactions with the NF-kB pathway which controls inflammatory reactions and immune response. Proteins involved in these pathways related to DMBT1 include TLR4 and MyD88 indicating its role in modulating immune responses.
Associated diseases and disorders	The Dmbt1 protein is linked to cancer and inflammatory diseases. In certain cancers such as brain and lung cancer it functions as a tumor suppressor. Loss or alteration of the DMBT1 gene can result in reduced immune surveillance leading to tumor progression. It also relates to inflammatory bowel disease where altered DMBT1 expression contributes to intestinal inflammation. Proteins like TLR4 with which DMBT1 interacts are implicated in both cancer and chronic inflammatory responses highlighting their interconnected roles.

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

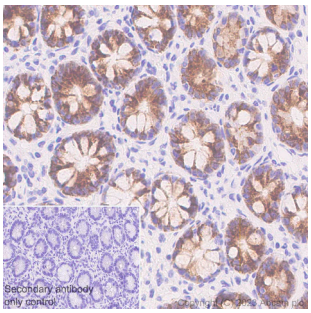
We do not recommend this combination. It is not covered by our product promise.

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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DMBT1 antibody [EPR25722-10] (ab316185)

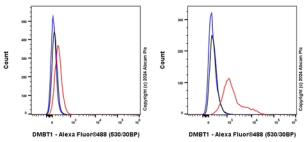
Immunohistochemical analysis of paraffin-embedded Human ileum tissue labeling DMBT1 with ab316185 at 1/2000 (0.242 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Cytoplasmic staining of the crypts and very basal parts of human ileum (PMID: 32436776).
The section was incubated with ab316185 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.

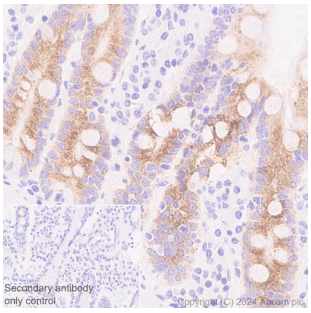


Flow Cytometry (Intracellular) - Anti-DMBT1 antibody [EPR25722-10] (ab316185)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized MCF7 (human breast adenocarcinoma epithelial cell, Left) / Capan-1 (human pancreatic adenocarcinoma epithelial cell, Right) cells labelling DMBT1 with ab316185 at 1/50 dilution (1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control.

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

Negative control: MCF7.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DMBT1 antibody [EPR25722-10] (ab316185)

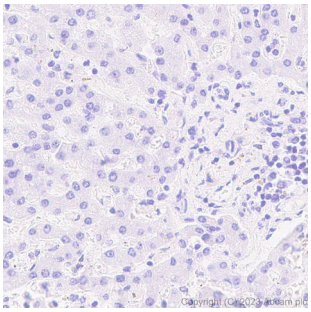
Immunohistochemical analysis of paraffin-embedded Human duodenum tissue labeling DMBT1 with ab316185 at 1/2000 (0.242 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Cytoplasmic staining of the crypts and very basal parts of human duodenum(PMID: 32436776).
The section was incubated with ab316185 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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DMBT1 antibody [EPR25722-10] (ab316185)

DMBT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human liver using rabbit Anti-DMBT1 antibody

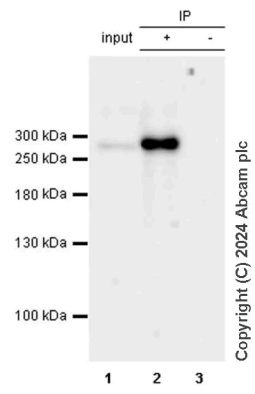
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling DMBT1 with ab316185 at 1/2000 (0.242 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: No staining on human liver (PMID: 32436776).
The section was incubated with ab316185 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.



Immunoprecipitation - Anti-DMBT1 antibody [EPR25722-10] (ab316185)

DMBT1 was immunoprecipitated from 0.35 mg Capan-1 (human pancreas adenocarcinoma epithelial cell) whole cell lysate with ab316185 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab316185 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-DMBT1 antibody [EPR25722-10] (ab316185) at 1/1000 dilution

Lane 1:

Capan-1 (human pancreas adenocarcinoma epithelial cell) whole cell lysate

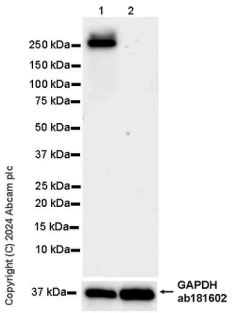
Lane 2:
ab316185 at 1/30 IP in Capan-1 (human pancreas adenocarcinoma epithelial cell) whole cell lysate

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab316185 in Capan-1 whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 41s



Western blot - Anti-DMBT1 antibody [EPR25722-10] (ab316185)

DMBT1 Western blot staining using rabbit Anti-DMBT1 antibody

Nagative control: MCF7(PMID: 32436776)

The molecular weight observed is consistent with what has been described in the literature (PMID:12015815).

Lysates were freshly made and used for Western blotting immediately to minimize protein degradation.

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

All lanes:
Western blot - Anti-DMBT1 antibody [EPR25722-10] (ab316185) at 1/1000 dilution

Lane 1:
Capan-1 (human pancreatic adenocarcinoma epithelial cell) whole cell lysate at 20 µg

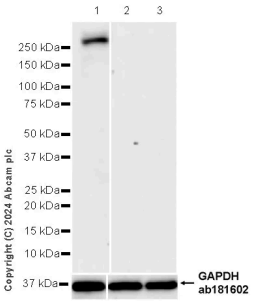
Lane 2:
MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 270 kDa, 330 kDa, 36 kDa

Exposure time: 70s



Western blot - Anti-DMBT1 antibody [EPR25722-10] (ab316185)

DMBT1 Western blot staining using rabbit Anti-DMBT1 antibody

Low expression: U-937, THP-1.

The molecular weight observed is consistent with what has been described in the literature (PMID:12015815).

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

All lanes:
Western blot - Anti-DMBT1 antibody [EPR25722-10] (ab316185) at 1/1000 dilution

Lane 1:
SUM149PT (human breast adenocarcinoma cell) whole cell lysate at 20 µg

Lane 2:
U-937 (human histiocytic lymphoma monocyte) whole cell lysate at 20 µg

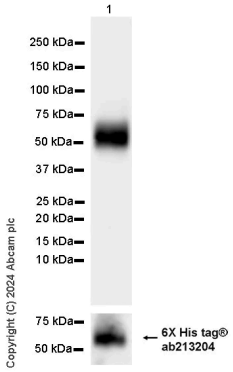
Lane 3:
THP-1 (human monocytic leukemia monocyte) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 270 kDa, 330 kDa, 36 kDa

Exposure time: 70s



Western blot - Anti-DMBT1 antibody [EPR25722-10] (ab316185)

DMBT1 Western blot staining of His-tagged human DMBT1 recombinant protein fragment using rabbit Anti-DMBT1 antibody

In Western blot, Anti-6X His tag® antibody [EPR20547] - ChIP Grade (ab213204) staining at 1/5000 dilution.

All lanes:
Western blot - Anti-DMBT1 antibody [EPR25722-10] (ab316185) at 1/1000 dilution

All lanes:
His-tagged human DMBT1 recombinant protein fragment at 10 ng

Secondary

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

Observed band size: 60 kDa

Exposure time: 10s

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