abcam

ab312328

Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54]

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	EPR28401-54
Purification technique	Affinity purification Protein A
Concentration	0.521 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Transfected cell lysate - Human
Dilution info	1/1000
Notes	(0.501ug/ml)

Predicted

Species	Mycobacterium tuberculosis
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line, Recombinant fragment
Dilution info	-
Notes	-

IHC-P

Tested

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

Predicted

Species	Mycobacterium tuberculosis
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Recombinant fragment
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Transfected cell line
Dilution info	1/100
Notes	-

Predicted

Species	Mycobacterium tuberculosis
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Recombinant fragment
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Transfected cell line
Dilution info	1/500
Notes	-

Predicted

Species	Mycobacterium tuberculosis
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Recombinant fragment
Dilution info	-
Notes	-

IP

Tested

Species	Transfected cell lysate - Human
Dilution info	1/30
Notes	-

Predicted

Species	Mycobacterium tuberculosis
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line, Recombinant fragment
Dilution info	-
Notes	-

I-ELISA

Tested

Species	Recombinant fragment
Dilution info	1000 ng/mL
Notes	Use at 125 ng/ml

Predicted

Species	Mycobacterium tuberculosis
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Transfected cell line

Dilution info	-
Notes	-

Target data

See full target information fbpB

Function	The antigen 85 proteins (FbpA, FbpB, FbpC) are responsible for the high affinity of mycobacteria for fibronectin, a large adhesive glycoprotein, which facilitates the attachment of M.tuberculosis to murine alveolar macrophages (AMs). They also help to maintain the integrity of the cell wall by catalyzing the transfer of mycolic acids to cell wall arabinogalactan and through the synthesis of alpha,alpha-trehalose dimycolate (TDM, cord factor). They catalyze the transfer of a mycoloyl residue from one molecule of alpha,alpha-trehalose monomycolate (TMM) to another TMM, leading to the formation of TDM.

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 Mycobacterium tuberculosis Ag85B protein also known as Antigen 85B or FBPA is a component of the Ag85 complex. This protein has a molecular mass of approximately 31 kDa. The Ag85B protein plays an important mechanical role by catalyzing the formation of the cord factor a major glycolipid in the cell wall of Mycobacterium tuberculosis. It is expressed in the mycobacterium's cell wall contributing to the virulence of this pathogen by promoting the invasion and survival within the host.
Biological function summary	The Ag85B protein serves in the assembly and maintenance of the mycobacterial cell wall by synthesizing mycolate. It is a part of the Ag85 complex which includes Ag85A Ag85B and Ag85C ensuring accurate synthesis and export of essential components of the cell wall. Through its actions Ag85B is involved in interacting with the host immune system and is a target for vaccine development due to its immunogenic properties. Its presence is detected during histological examinations of infected tissues where it shows the interaction with host cells.
Pathways	The Ag85B protein functions within the mycolic acid biosynthesis pathway essential for maintaining the structure of the mycobacterial cell envelope. This protein interacts with Ag85A and Ag85C to orchestrate complex lipid synthesis required for Mycobacterium tuberculosis' survival. Ag85B's role in lipid metabolism makes it important in the pathogen's adaptation to the host environment by altering the cell wall to evade immune detection.
Associated diseases and disorders	Ag85B is highly relevant to respiratory diseases like tuberculosis. This protein plays a role in the pathogen's ability to resist destruction by the host's immune system contributing to the chronic nature of tuberculosis. Additionally Ag85B has been investigated in the context of its potential utility in vaccines and diagnostic tests for Mycobacterium tuberculosis infections. Its interactions with other proteins in the Ag85 complex make it a focus of research for developing therapeutics to treat and manage tuberculosis.

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.

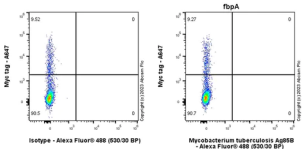
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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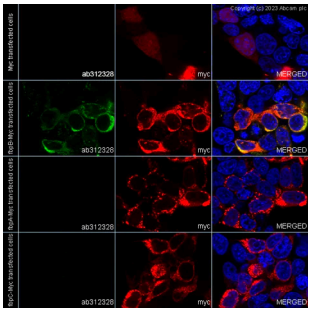
11 product images



Flow Cytometry (Intracellular) - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

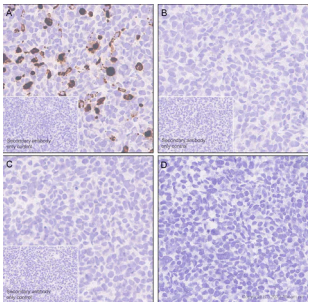
Mycobacterium tuberculosis Ag85B Flow Cytometry (Intracellular) staining of 293T cells (human embryonic kidney epithelial cell) transfected with a fbpA expression vector containing a myc tag using rabbit Anti-Mycobacterium tuberculosis Ag85B antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized 293T cells (human embryonic kidney epithelial cell) transfected with a fbpA expression vector containing a myc tag cells labelling Mycobacterium tuberculosis Ag85B with ab312328 at 1/500 dilution (0.1 ug)/Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

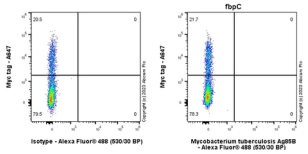
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized 293T (human embryonic kidney epithelial cell) cells labelling Mycobacterium tuberculosis Ag85B with ab312328 at 1/100 (10.01 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green). Confocal image showing positive staining in 293T cells transfected with a fbpB expression vector containing a myc tag, and no staining in 293T cells transfected with a fbpA or fbpC expression vector containing a myc tag. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab223895 Anti-Myc tag Mouse monoclonal antibody (Alexa Fluor® 647) was used to counterstain tubulin at 1/200 (2.5 ug/ml) dilution (Red). 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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

Mycobacterium tuberculosis Ag85B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Mycobacterium tuberculosis Ag85B antibody

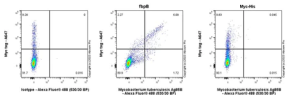
Immunohistochemical analysis of paraffin-embedded (A) HEK-293T (human tissue labeling Mycobacterium tuberculosis Ag85B with ab312328 at 1/100 (5.01 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on (A) HEK-293T cells transfected with a fbpB expression vector containing a his tag. No staining on (B) HEK-293T cells transfected with a fbpA expression vector containing a his tag, (C) HEK-293T cells transfected with a fbpC expression vector containing a his tag and (D) HEK-293T cells transfected with empty vector containing a his tag. The section was incubated with ab312328 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-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

Mycobacterium tuberculosis Ag85B Flow Cytometry (Intracellular) staining of 293T cells (human embryonic kidney epithelial cell) transfected with a fbpC expression vector containing a myc tag using rabbit Anti-Mycobacterium tuberculosis Ag85B antibody

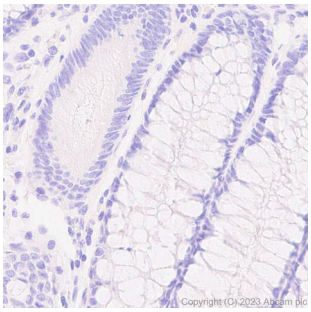
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized 293T cells (human embryonic kidney epithelial cell) transfected with a fbpC expression vector containing a myc tag cells labelling Mycobacterium tuberculosis Ag85B with ab312328 at 1/500 dilution (0.1 ug)/Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Flow Cytometry (Intracellular) - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

Mycobacterium tuberculosis Ag85B Flow Cytometry (Intracellular) staining using rabbit Anti-Mycobacterium tuberculosis Ag85B antibody

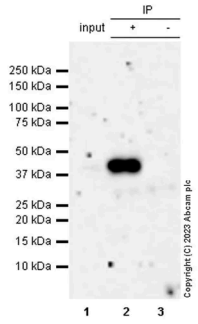
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Isotype (Left) / 293T cells (human embryonic kidney epithelial cell) transfected with a fbpB expression vector containing a myc tag (Middle) / 293T cells transfected with an empty expression vector containing a myc tag (Right) cells labelling Mycobacterium tuberculosis Ag85B with ab312328 at 1/500 dilution (0.1 ug)/Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

Mycobacterium tuberculosis Ag85B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human colon using rabbit Anti-Mycobacterium tuberculosis Ag85B antibody

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling Mycobacterium tuberculosis Ag85B with ab312328 at 1/100 (5.01 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on human colon. The section was incubated with ab312328 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-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

Mycobacterium tuberculosis Ag85B was immunoprecipitated from 0.35 mg HEK-293T cells (human embryonic kidney epithelial cell) transfected with Human fbpB expression vector containing a his tag whole cell lysate with ab312328 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab312328 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: HEK-293T cells (human embryonic kidney epithelial cell) transfected with Human fbpB expression vector containing a his tag whole cell lysate
Lane 2: HEK-293T cells (human embryonic kidney epithelial cell) transfected with Human fbpB expression vector containing a his tag whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab312328 in HEK-293T cells transfected with Human fbpB expression vector containing a his tag whole cell lysate

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

Exposure time: 180 seconds

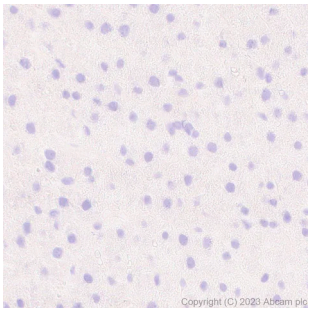
All lanes:
Immunoprecipitation - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328) at 1/1000 dilution

All lanes:
HEK-293T cells (human embryonic kidney epithelial cell) transfected with Human fbpB expression vector containing a his tag whole cell lysate at 10 µg

Secondary

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

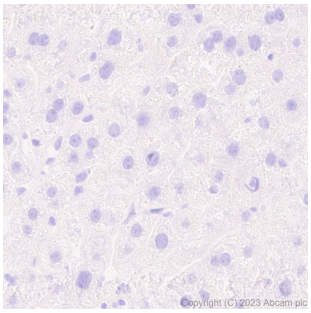
Exposure time: 180s



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

Mycobacterium tuberculosis Ag85B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat liver using rabbit Anti-Mycobacterium tuberculosis Ag85B antibody

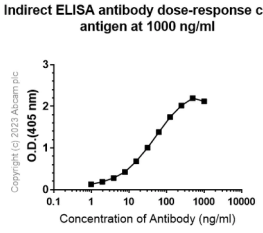
Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Mycobacterium tuberculosis Ag85B with ab312328 at 1/100 (5.01 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on rat liver. The section was incubated with ab312328 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-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

Mycobacterium tuberculosis Ag85B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse liver using rabbit Anti-Mycobacterium tuberculosis Ag85B antibody

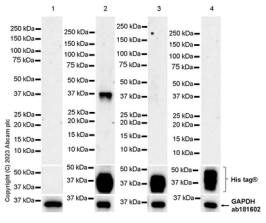
Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Mycobacterium tuberculosis Ag85B with ab312328 at 1/100 (5.01 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on mouse liver. The section was incubated with ab312328 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.



Indirect ELISA - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

Indirect ELISA analysis of ab312328 at 1000-0 ng/ml. The Secondary antibody used was Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) at 1:2500 dilution.
Antigen: Mycobacterium tuberculosis Ag85B.

Antigen concentration: 1000 ng/ml



Western blot - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
This antibody does not cross-react with human fbpA and fbpC.

This blot was developed using a high sensitivity ECL substrate. The high-sensitivity ECL substrate used allows for the detection of proteins in the mid-femtogram range.

In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution.

All lanes:
Western blot - Anti-Mycobacterium tuberculosis Ag85B antibody [EPR28401-54] (ab312328) at 1/1000 dilution

Lane 1:
293T cells transfected with an empty vector containi a His-tag whole cell lysate at 20 µg

Lane 2:
293T cells transfected with a human fbpB expression vector containi a His-tag whole cell lysate at 20 µg

Lane 3:
293T cells transfected with a human fbpA expression vector containi a His-tag whole cell lysate at 20 µg

Lane 4:
293T cells transfected with a human fbpC expression vector containi a His-tag whole cell lysate at 20 µg

Secondary

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

Developed using the ECL technique.

Observed band size: 37 kDa

Exposure time: 180s

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