abcam

ab154785

Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950]

Recombinant | RabMAb

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	EPR9950
Purification technique	Affinity purification Protein A
Concentration	0.104 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Expected

Species	Mouse

Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information ARHGEF16

Function	Guanyl-nucleotide exchange factor of the RHOG GTPase stimulating the exchange of RHOG-associated GDP for GTP. May play a role in chemotactic cell migration by mediating the activation of RAC1 by EPHA2. May also activate CDC42 and mediate activation of CDC42 by the viral protein HPV16 E6.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

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.

Species reactivity
Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

Supplementary info

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

Activity summary	Rho guanine exchange factor 16 also known as ARHGEF16 or NBR is a protein that acts as an exchange factor for Rho GTPases by facilitating the exchange of GDP for GTP. This protein has a molecular mass of approximately 100 kDa. It is widely expressed in various tissues with higher levels found in the brain and lungs. The alternative names for this protein "guanine exchange factor" and "anti-ARHGEF16" reflect its involvement in activating small GTPase by swapping GDP with GTP influencing several cellular processes.
Biological function summary	Rho guanine exchange factor 16 plays a role in signal transduction pathways that control cytoskeleton dynamics cell migration and growth. It often functions as part of a larger protein complex involved in cellular response to external stimuli. By interacting with and activating Rho family GTPases like RhoA it contributes to the reorganization of actin filaments and the regulation of cell shape and motility which are critical for tissue remodeling and development.
Pathways	Rho guanine exchange factor 16 participates in pathways such as Rho GTPase cycle and endothelial barrier maintenance. It is closely associated with RhoA within these pathways affecting cell cycle regulation and cellular stress responses. This protein ensures the activation of downstream effectors facilitating changes required for cellular adherence and survival under various physiological conditions.
Associated diseases and disorders	Dysregulation or mutation of Rho guanine exchange factor 16 links to cancer progression and neurological disorders. Abnormal signaling through this target can lead to altered actin dynamics affecting cell division and migration seen in tumor metastasis. Associated proteins such as RhoA also play roles in these diseases highlighting the complex interaction networks involving Rho guanine exchange factor 16 that can influence disease outcomes.

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.

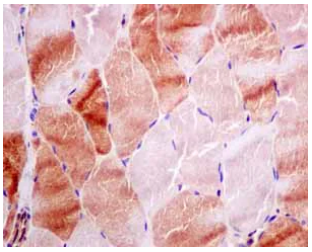
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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10 product images

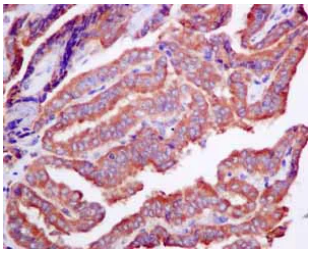


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

Rho guanine exchange factor 16/NBR Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Rho guanine exchange factor 16/NBR antibody

Immunohistochemical analysis of paraffin embedded Human skeletal muscle tissue using ab154785 showing +ve staining.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

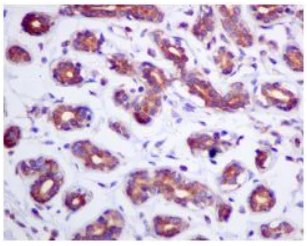


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

Rho guanine exchange factor 16/NBR Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Rho guanine exchange factor 16/NBR antibody

Immunohistochemical analysis of paraffin embedded Human thyroid gland carcinoma tissue using ab154785 showing +ve staining.

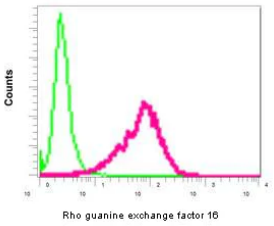
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

Rho guanine exchange factor 16/NBR Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Rho guanine exchange factor 16/NBR antibody

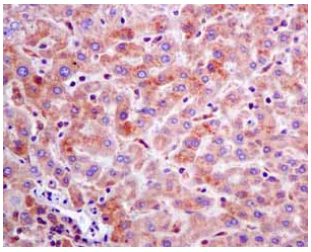
Immunohistochemical analysis of paraffin-embedded Human normal breast tissue labeling Rho guanine exchange factor 16/NBR with ab154785 at 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

Rho guanine exchange factor 16/NBR Flow Cytometry (Intracellular) staining using rabbit Anti-Rho guanine exchange factor 16/NBR antibody

Intracellular flow cytometric analysis of permeabilized HeLa cells labeling Rho guanine exchange factor 16/NBR with ab154785 at 1/10 dilution (red) compared to a rabbit IgG negative control (green).

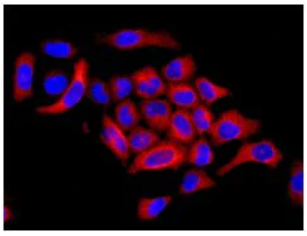


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

Rho guanine exchange factor 16/NBR Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Rho guanine exchange factor 16/NBR antibody

Immunohistochemical analysis of paraffin embedded Human normal liver tissue using ab154785 showing +ve staining.

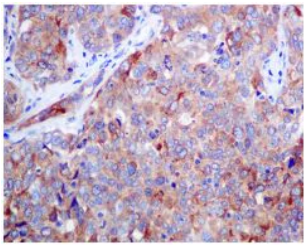
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

Rho guanine exchange factor 16/NBR Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Rho guanine exchange factor 16/NBR antibody

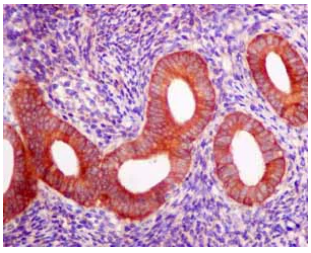
Immunofluorescent analysis of HeLa cells labeling Rho guanine exchange factor 16/NBR with ab154785 at 1/100 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

Rho guanine exchange factor 16/NBR Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Rho guanine exchange factor 16/NBR antibody

Immunohistochemical analysis of paraffin-embedded Human cervix carcinoma tissue labeling Rho guanine exchange factor 16/NBR with ab154785 at 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

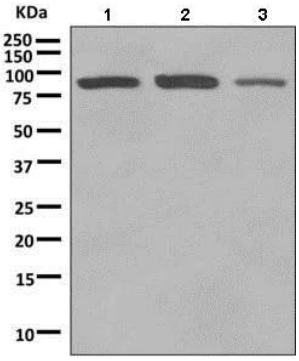


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

Rho guanine exchange factor 16/NBR Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Rho guanine exchange factor 16/NBR antibody

Immunohistochemical analysis of paraffin embedded Human normal uterus tissue using ab154785 showing +ve staining.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

All lanes:
Western blot - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

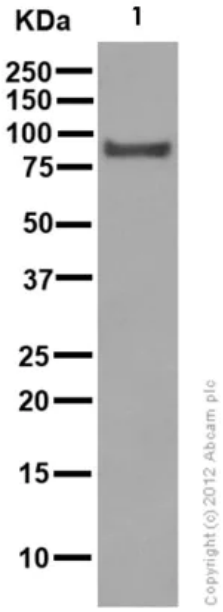
Lane 2:
MCF-7 cell lysate at 10 µg

Lane 3:
293T cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 80 kDa



Western blot - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785)

Rho guanine exchange factor 16/NBR Western blot staining of Mouse kidney lysate using rabbit Anti-Rho guanine exchange factor 16/NBR antibody

Blocking and Diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Rho guanine exchange factor 16/NBR antibody [EPR9950] (ab154785) at 1/1000 dilution

All lanes:
Mouse kidney lysate at 20 µg

Secondary

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

Predicted band size: 80 kDa

Observed band size: 80 kDa

Exposure time: 180s

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