abcam

Product datasheet

Anti-GBF1 antibody [EPR14889] - C-terminal ab189512

Recombinant RabMAb

★★★★★ 1 Abreviews 8 Images

Overview

Product name	Anti-GBF1 antibody [EPR14889] - C-terminal
Description	Rabbit monoclonal [EPR14889] to GBF1 - C-terminal
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), ICC/IF, WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	HeLa, Jurkat, 293, PC12 and NIH 3T3 cell lysates; Human kidney and Mouse cardiac muscle tissues; 293 and HeLa cells.
General notes	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 production For more information see here. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 59% PBS, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR14889
Isotype	IgG

Applications

The Abpromise guarantee Our Abpromise guarantee covers the use of ab189512 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/230. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		1/250 - 1/500.
WB		1/10000 - 1/50000. Detects a band of approximately 250 kDa (predicted molecular weight: 206 kDa).
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function Guanine-nucleotide exchange factor (GEF) for members of the Arf family of small GTPases involved in trafficking in the early secretory pathway; its GEF activity initiates the coating of nascent vesicles via the localized generation of activated ARFs through replacement of GDP with GTP. Recruitment to cis-Golgi membranes requires membrane association of Arf-GDP and can be regulated by ARF1, ARF3, ARF4 and ARF5. Involved in the recruitment of the COPI coat complex to the endoplasmic reticulum exit sites (ERES), and the endoplasmic reticulum-Golgi intermediate (ERGIC) and cis-Golgi compartments which implicates ARF1 activation. Involved in COPI vesicle-dependent retrograde transport from the ERGIC and cis-Golgi compartments to the endoplasmatic reticulum (ER) (PubMed:16926190, PubMed:17956946, PubMed:18003980, PubMed:12047556, PubMed:12808027, PubMed:19039328, PubMed:24213530). Involved in the trans-Golgi network recruitment of GGA1, GGA2, GGA3, BIG1, BIG2, and the AP-1 adaptor protein complex related to chlathrin-dependent transport; the function requires its GEF activity (probably at least in part on ARF4 and ARF5) (PubMed:23386609). Has GEF activity towards ARF1 (PubMed:15616190). Has in vitro GEF activity towards ARF5 (By similarity). Involved in the processing of PSAP (PubMed:17666033). Required for the assembly of the Golgi apparatus (PubMed:12808027, PubMed:18003980). The AMPK-phosphorylated form is involved in Golgi disassembly during mitotis and under stress conditions (PubMed:18063581, PubMed:23418352). May be involved in the COPI vesicle-dependent recruitment of PNPLA2 to lipid droplets; however, this function is under debate (PubMed:19461073, PubMed:22185782). In neutrophils, involved in G protein-coupled receptor (GPCR)-mediated chemotaxis und superoxide production. Proposed to be recruited by phosphatidylinositol-phosphates generated upon GPCR stimulation to the leading edge where it recruits and activates ARF1, and is involved in recruitment of GIT2 and the NADPH oxidase complex (PubMed:22573891).

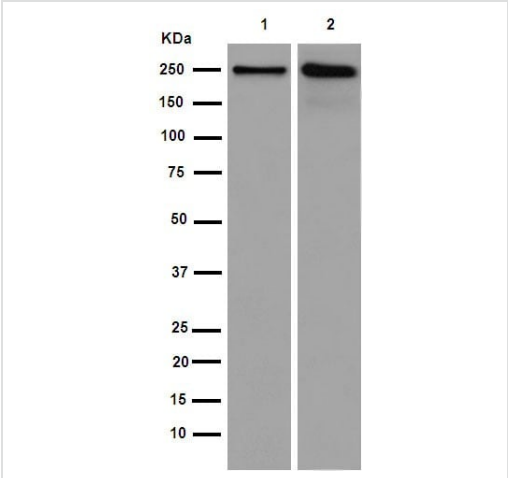
Tissue specificity Ubiquitous.

Sequence similarities Contains 1 SEC7 domain.

Domain The DCB (dimerization and cyclophiln-binding) and HUS (homology upstream of Sec7) domains are necessary for dimerization. The DCB domain is proposed to support constitutive homodimerization; the HUS domain interacts with the DCB domain which may occur

	intramolecular or intermolecuar.
Post-translational modifications	AMPK-mediated phosphorylation at Thr-1337 is induced by 2-deoxyglucose (2-DG) and AICA ribonucleotide, and occurs during mitosis leading to membrane disassociation and inactivation of ARF1 during mitosis.
Cellular localization	Golgi apparatus, cis-Golgi network. Endoplasmic reticulum-Golgi intermediate compartment. Golgi apparatus, trans-Golgi network. Cytoplasm. Lipid droplet. Membrane. Cycles rapidly on and off early Golgi membranes (PubMed:15616190). Stabilized on membranes when complexed with ARF1-GDP and is released from both ARF1 and membranes after it catalyzes GDP displacement and ARF1 binds GTP. Continuous cycles of recruitment and dissociation of GBF1 to membranes are required for sustained ARF activation and COP I recruitment (PubMed:15813748). In neutrophils is translocated from the Golgi to the leading edge upon GPCR stimulation (PubMed:22573891). Localization to lipid droplets is questionable (PubMed:22185782).

Images



Western blot - Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512)

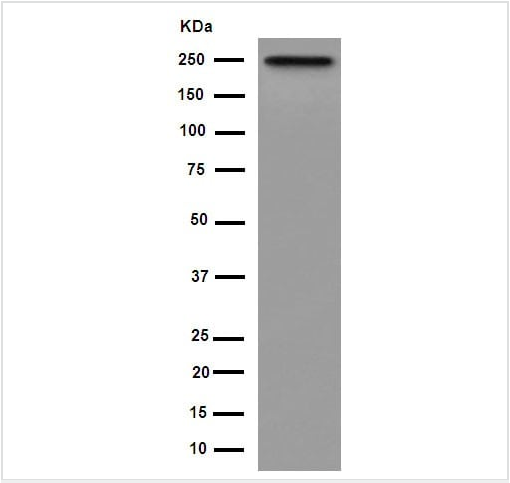
All lanes : Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512) at 1/20000 dilution

Lane 1 : HeLa cell lysate
Lane 2 : Jurkat cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 206 kDa
Observed band size: 250 kDa



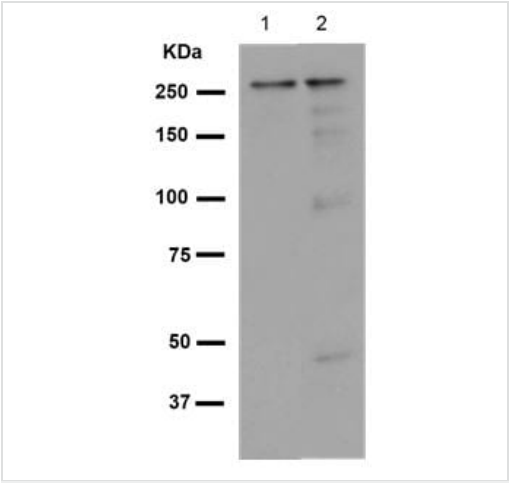
Western blot - Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512)

Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512) at 1/50000 dilution + 293 cell lysate at 10 µg

Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 206 kDa
Observed band size: 250 kDa



Western blot - Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512)

All lanes : Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512) at 1/5000 dilution

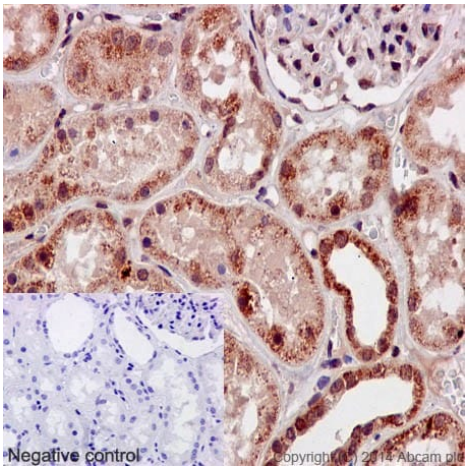
Lane 1 : PC12 cell lysate
Lane 2 : NIH 3T3 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 206 kDa
Observed band size: 250 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512)

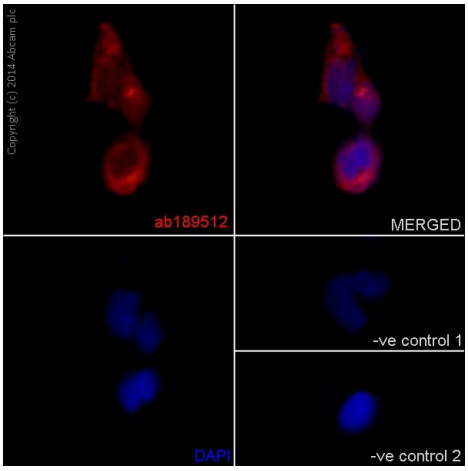
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling GBF1 with ab189512 at 1/100 dilution followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin (Inset: negative control).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512)

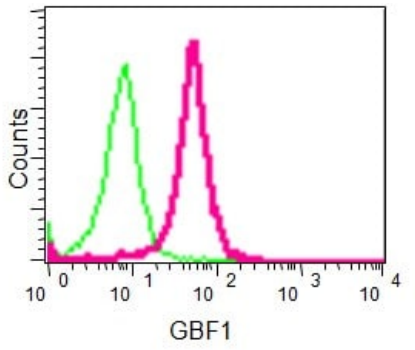
Immunohistochemical analysis of paraffin-embedded Mouse cardiac muscle tissue labeling GBF1 with ab189512 at 1/100 dilution followed by prediluted HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin (Inset: negative control).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunofluorescent analysis of 4% paraformaldehyde-fixed 293 cells labeling GBF1 with ab189512 at 1/250 dilution followed by Goat anti rabbit IgG (Alexa Fluor® 555) secondary antibody at 1/200 dilution. Counter stained with DAPI (blue).

Immunocytochemistry/ Immunofluorescence - Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512)



Intracellular flow cytometric analysis of 2% paraformaldehyde-fixedHeLa cells labeling GBF1 with ab189512 at 1/230 dilution (red) compared to a Rabbit monoclonal IgG isotype control (green), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.

Flow Cytometry (Intracellular) - Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512)

Anti-GBF1 antibody [EPR14889] - C-terminal (ab189512)

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