abcam

ab215966

Anti-GM130 antibody [EP892Y] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EP892Y
Purification technique	Affinity purification Protein A
Specificity	Mouse and rat cell lines pc12, 3t3, raw 264.7 were tested positive in WB. However, brain, kidney, spleen and heart were negative from the two species.
Concentration	1.028 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	Overnight incubation is recommended.

Expected

Species	African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	Overnight incubation is recommended.

Species	Rat
Dilution info	-
Notes	Overnight incubation is recommended.

Species	Cow
Dilution info	-
Notes	-

Species	Monkey
Dilution info	-
Notes	-

Species	Dog
Dilution info	-
Notes	-

IP

Tested

Species	Human

Dilution info	-
Notes	-

Expected

Species	African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse, Rat, Cow, Monkey, Dog
Dilution info	-
Notes	-

WB

Tested

Species	African green monkey
Dilution info	-
Notes	-

Expected

Species	Human, Dog
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse, Rat, Cow, Monkey
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	PFA fixation should be most suitable.

Expected

Species	African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	PFA fixation should be most suitable.

Species	Rat
Dilution info	-
Notes	PFA fixation should be most suitable.

Species	Cow
Dilution info	-
Notes	-

Species	Monkey
Dilution info	-
Notes	-

Species	Dog
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse, Rat, Cow, Monkey, Dog
Dilution info	-
Notes	-

Target data

See full target information Golgin subfamily A member 2

Function

Peripheral membrane component of the cis-Golgi stack that acts as a membrane skeleton that maintains the structure of the Golgi apparatus, and as a vesicle thether that facilitates vesicle fusion to the Golgi membrane (Probable) (PubMed:16489344). Required for normal protein transport from the endoplasmic reticulum to the Golgi apparatus and the cell membrane (By similarity). Together with p115/USO1 and STX5, involved in vesicle tethering and fusion at the cis-Golgi membrane to maintain the stacked and inter-connected structure of the Golgi apparatus. Plays a central role in mitotic Golgi disassembly: phosphorylation at Ser-37 by CDK1 at the onset of mitosis inhibits the interaction with p115/USO1, preventing tethering of COPI vesicles and thereby inhibiting transport through the Golgi apparatus during mitosis (By similarity). Also plays a key role in spindle pole assembly and centrosome organization (PubMed:26165940). Promotes the mitotic spindle pole assembly by activating the spindle assembly factor TPX2 to nucleate microtubules around the Golgi and capture them to couple mitotic membranes to the spindle: upon phosphorylation at the onset of mitosis, GOLGA2 interacts with importin-alpha via the nuclear localization signal region, leading to recruit importin-alpha to the Golgi membranes and liberate the spindle assembly factor TPX2 from importin-alpha. TPX2 then activates AURKA kinase and stimulates local microtubule nucleation. Upon filament assembly, nascent microtubules are further captured by GOLGA2, thus linking Golgi membranes to the spindle (PubMed:19242490, PubMed:26165940). Regulates the meiotic spindle pole

assembly, probably via the same mechanism (By similarity). Also regulates the centrosome organization (PubMed:18045989, PubMed:19109421). Also required for the Golgi ribbon formation and glycosylation of membrane and secretory proteins (PubMed:16489344, PubMed:17314401).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab215966 is the carrier-free version of ab52649.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	GM130 also known as Golgi matrix protein 130 kDa or GM-130 plays an important role in the organization of the Golgi apparatus. The GM130 protein is vital for maintaining the structure of the Golgi serving as a Golgi marker for researchers. Its molecular weight is approximately 130 kDa. You will commonly find GM130 expressed in cells localizing to the cis-Golgi network. As a Golgi marker it serves as an indication of the integrity and positioning of the Golgi apparatus in the cell.
Biological function summary	GM130 serves as a structural component within the Golgi matrix. It interacts with other proteins such as GRASP65 to form a complex which is essential for Golgi stacking and maintenance of Golgi architecture. This interaction helps regulate transport processes inside cells. GM130 proteins help formation of mini-stacks and transitioning of vesicles. In cells GM130 plays a significant role to maintain efficient protein trafficking through the Golgi network.
Pathways	GM130 interacts with proteins like Rab1 during the vesicular transport pathway. It plays a part in the transport of proteins from the endoplasmic reticulum to the Golgi apparatus. Another related pathway involves SNARE proteins whereby GM130 contributes to membrane docking and fusion events. Through these interactions GM130 modulates the fidelity and specificity of molecular cargo transport within the cell.
Associated diseases and disorders	GM130 has a connection to neurodegenerative diseases such as frontotemporal dementia. Disruption in GM130 proteins affects Golgi structure and function potentially leading to protein trafficking defects associated with the disorder. GM130 also relates to Alzheimer's disease through its interaction with tau protein. Alterations in GM130's function can influence tau pathology contributing to disease progression.

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

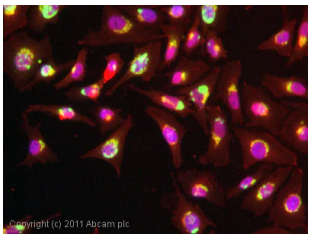
We do not recommend this combination. It is not covered by our product promise.

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.

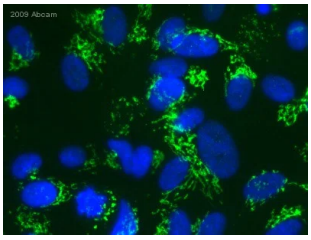
9 product images



Immunocytochemistry/ Immunofluorescence - Anti-GM130 antibody [EP892Y] - BSA and Azide free (ab215966)

GM130 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GM130 antibody

ICC/IF image of unpurified ab52946 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (unpurified ab52946, 1µg/ml) overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti-rabbit IgG - H&L, pre-adsorbed (ab96899) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52649).

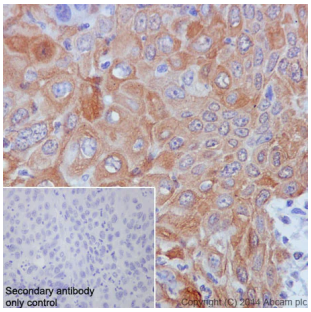


This image is courtesy of a customer review submitted by Vladimir Milenkovic.

Immunocytochemistry/ Immunofluorescence - Anti-GM130 antibody [EP892Y] - BSA and Azide free (ab215966)

GM130 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GM130 antibody

Unpurified ab52649 staining GM130 in human ARPE-19 cells by ICC/IF (immunocytochemistry/immunofluorescence). Cells were formaldehyde fixed, permeabilized by 0.5% TX-100 and blocked with 5% serum for 20 minutes at 25°C. The sample was incubated with the primary antibody (1/500 in 1% goat serum, 0.1%TX100, 1 x PBS) for 16 hours at 4°C. An Alexa Fluor® 488-conjugated Goat anti-rabbit polyclonal (1/500) was used as the secondary.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52649).

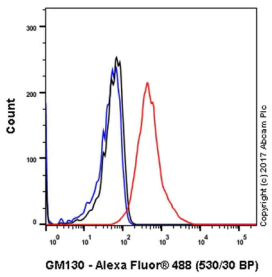


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GM130 antibody [EP892Y] - BSA and Azide free (ab215966)

GM130 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GM130 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cervix carcinoma tissue labelling GM130 with purified ab52649 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

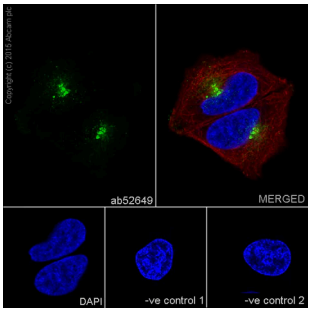
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52649).



Flow Cytometry (Intracellular) - Anti-GM130 antibody [EP892Y] - BSA and Azide free (ab215966)

GM130 Flow Cytometry (Intracellular) staining using rabbit Anti-GM130 antibody

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling GM130 (red) with ab52649 at a 1/20 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52649).



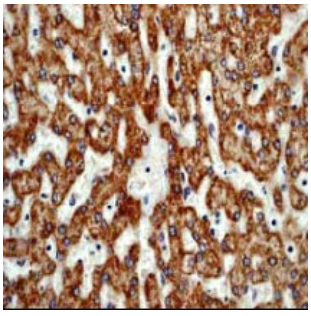
Immunocytochemistry/ Immunofluorescence - Anti-GM130 antibody [EP892Y] - BSA and Azide free (ab215966)

GM130 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GM130 antibody

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling GM130 with purified ab52649 at 1/50. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain. ab7291, a mouse anti-tubulin (1/1000) and ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500) were also used.
Control 1: primary antibody (1/50) and secondary antibody, ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

Control 2: ab7291 (1/1000) and secondary antibody, ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500).

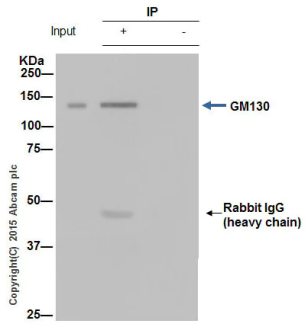
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52649).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GM130 antibody [EP892Y] - BSA and Azide free (ab215966)

GM130 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GM130 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human liver tissue labelling GM130 with unpurified ab52649 at a dilution of 1/500.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52649).



Immunoprecipitation - Anti-GM130 antibody [EP892Y] - BSA and Azide free (ab215966)

ab52649 (purified) at 1/20 immunoprecipitating GM130 in HeLa whole cell lysate.
Lane 1 (input): HeLa whole cell lysate (10µg)

Lane 2 (+): ab52649 + HeLa whole cell lysate (10µg).

Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab52649 in HeLa whole cell lysate.

For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1500 dilution.

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52649).

All lanes:
Immunoprecipitation - Anti-GM130 antibody [EP892Y] - cis-Golgi Marker (ab52649)

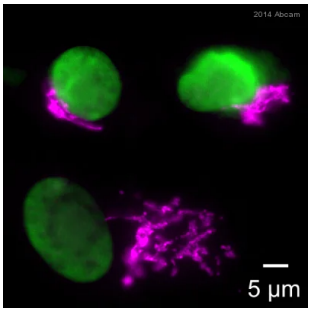
Lane 1:
HeLa whole cell lysate at 10 µg

Lane 2:
ab52649 + HeLa whole cell lysate at 10 µg

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab52649 in HeLa whole cell lysate

Predicted band size: 113 kDa

Observed band size: 130 kDa

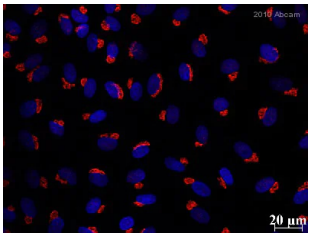


This image is courtesy of a customer review submitted by Aaron Halpen.

Immunocytochemistry/ Immunofluorescence - Anti-GM130 antibody [EP892Y] - BSA and Azide free (ab215966)

GM130 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GM130 antibody

Unpurified ab52649 staining GM130 (magenta) in monkey kidney cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde and blocked with 3% BSA + 0.5% Triton X-100 for 45 minutes at 25°C. Samples were incubated with primary antibody (1/1500 in 3% BSA + 0.5% Triton X-100) for 45 minutes at 25°C. An Alexa Fluor® 647-conjugated donkey anti-rabbit IgG polyclonal (2 µg/ml) was used as the secondary antibody. Nuclei stained with Picogreen.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52649).



Immunocytochemistry/ Immunofluorescence - Anti-GM130 antibody [EP892Y] - BSA and Azide free (ab215966)

GM130 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-GM130 antibody

Unpurified ab52649 staining GM130 in Bovine brain microvascular endothelial cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde,

This image is courtesy of a customer review submitted by JL Balligand.

permeabilized with 0.1% saponin and blocked with 5% BSA for 90 minutes at 37°C. Samples were incubated with primary antibody (1/100 in 0.1% saponin + 1% BSA) for 18 hours at 4°C. An undiluted Alexa Fluor® 568-conjugated Goat anti-rabbit IgG polyclonal was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52649).

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