abcam

# ab302489

# Anti-GM130 antibody [EP892Y] - Chicken IgY (Chimeric)

Recombinant | 20ul selling size

## Key facts

| | |
|---|---|
| **Isotype** | IgY |
| **Host species** | Chicken |
| **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** | EP892Y |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1.059 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## WB

### Not recommended

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/500 |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

**Not recommended**

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IP

**Not recommended**

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **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 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

This chicken monoclonal chimeric antibody has been engineered from a RabMAb parent antibody (ab52649). By necessity, some rabbit sequence is retained as part of the variable domain. When multiplexing with other rabbit-derived antibodies, using cross absorbed FC-reactive secondary antibodies are recommended.

**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** | 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**

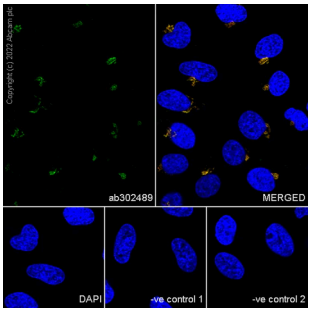
We do not recommend this combination. It is not covered by our product promise.

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.

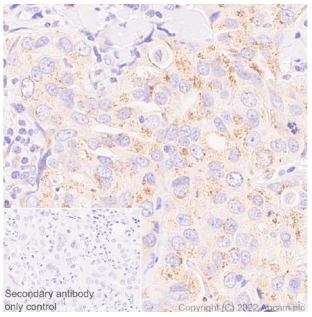
## 4 product images




## Immunocytochemistry/ Immunofluorescence - Anti-GM130 antibody [EP892Y] - Chicken IgY (Chimeric) (ab302489)

GM130 Immunocytochemistry/ Immunofluorescence staining of HeLa (human cervix adenocarcinoma epithelial cell) using chicken Anti-GM130 antibody

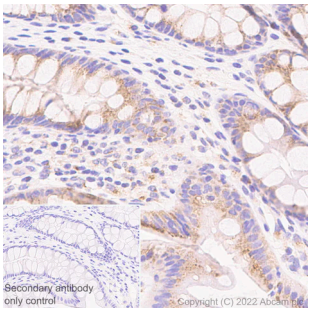
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labelling GM130 with ab302489 at 1/500 (1.814 ug/ml) dilution, followed by ab150173 Goat Anti-Chicken IgY H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing golgi staining in HeLa cell line is observed. ab52649 Anti-GM130 rabbit monoclonal antibody - cis-Golgi Marker was used to counterstain tubulin at 1/100 5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150173 Goat Anti-Chicken IgY H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GM130 antibody [EP892Y] - Chicken IgY (Chimeric) (ab302489)

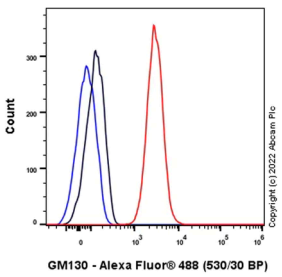
GM130 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Paraffin-embedded Human breast carcinoma tissue using chicken Anti-GM130 antibody

Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labeling GM130 with ab302489 at 1/1000 (0.907 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on human breast carcinoma. The section was incubated with ab302489 for 30 mins at room temperature, followed by Rabbit Anti-Chicken IgY antibody (ab97136) for 8 mins during the LeicaDS9800 kit staining procedure. 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) was used. Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GM130 antibody [EP892Y] - Chicken IgY (Chimeric) (ab302489)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling GM130 with ab302489 at 1/1000 (0.907 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection). Positive staining on human colon. The section was incubated with ab302489 for 30 mins at room temperature, followed by Rabbit Anti-Chicken IgY antibody (ab97136) for 8 mins during the LeicaDS9800 kit staining procedure.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 with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins




## Flow Cytometry (Intracellular) - Anti-GM130 antibody [EP892Y] - Chicken IgY (Chimeric) (ab302489)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labelling GM130 with ab302489 at 1/1000 dilution (0.1ug) (Red) compared with a Chicken IgY (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti-Chicken IgY H&L (Alexa Fluor® 488, ab150173) at 1/2000 dilution was used as the secondary antibody.

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