abcam

ab108938

Anti-GPA33 antibody [EPR4240]

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	EPR4240
Purification technique	Affinity purification Protein A
Concentration	0.121 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt (Intra)

Expected

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

IHC-P

Tested

Species	Human
Dilution info	1/400
Notes	Antigen retrieval recommended; heat up to 98 degrees C, below boiling, and then let cool for 10-20 min. **For unpurified use at 1/250 - 1/500.** Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

IP

Tested

Species	Human
Dilution info	1/20
Notes	**For unpurified use at 1/10 - 1/100.**

WB

Tested

Species	Human
Dilution info	1/1000
Notes	**For unpurified use at 1/1000 - 1/10000.**

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Target data

See full target information GPA33

Function	May play a role in cell-cell recognition and signaling.

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

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

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	GPA33 also known as Glycoprotein A33 is a cell surface antigen with a molecular mass of approximately 43 kDa. The protein is primarily expressed in the gastrointestinal tract especially in epithelial cells of the colon and small intestine. GPA33 is known for its role in cellular adhesion and maintaining epithelial

	integrity. It features as a single-pass transmembrane protein hinting at its involvement in cell signaling processes.
Biological function summary	The GPA33 protein plays a role in cell-cell adhesion and is implicated in forming stable cell-community networks. It is associated with the epithelial membrane complexes contributing to the structural integrity vital for epithelial tissue health. GPA33 does not function in isolation but interacts with other cell surface molecules to mediate its effects supporting epithelial tissue resistance and injury repair.
Pathways	The GPA33 antigen engages in signaling pathways important for epithelial cell adhesion and communication. It is involved in the Wnt signaling pathway which is pivotal in colon epithelial homeostasis and tumor suppression. Through this pathway GPA33 interacts with proteins such as β-catenin facilitating signal transduction that governs cell proliferation and differentiation.
Associated diseases and disorders	GPA33 has strong associations with colorectal cancer and inflammatory bowel disease. Overexpression of GPA33 occurs frequently in colorectal cancer providing a target for therapeutic intervention and diagnostic imaging. GPA33's role in colorectal cancer also links it to proteins like carcinoembryonic antigen (CEA) which are vital in cancer progression and metastasis. Understanding GPA33's involvement in these diseases is important for developing targeted therapies and improving patient 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

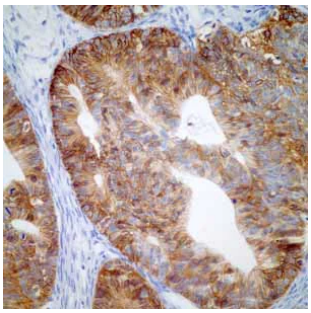
We do not recommend this combination. It is not covered by our product promise.

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.

14 product images

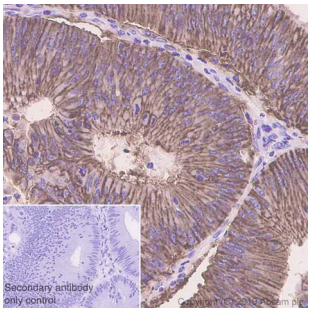


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GPA33 antibody

Unpurified ab108938 showing positive staining in Ovarian carcinoma tissue.

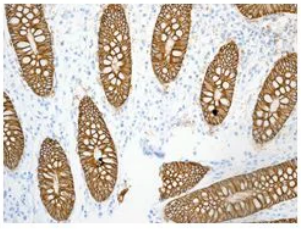
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GPA33 antibody

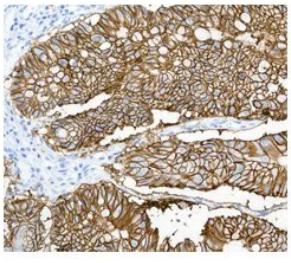
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon cancer tissue sections labeling GPA33 with Purified ab108938 at 1:400 dilution (0.25 µg/ml). Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GPA33 antibody

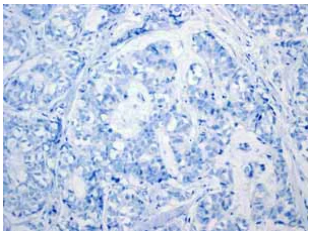
Unpurified ab108938 at 1/250 dilution staining GPA33 in paraffin-embedded Human colon tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GPA33 antibody

Unpurified ab108938 at 1/250 dilution staining GPA33 in paraffin-embedded Human colonic adenocarcinoma tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

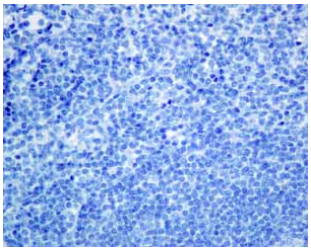


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GPA33 antibody

Unpurified ab108938 showing negative staining in Breast carcinoma tissue.

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

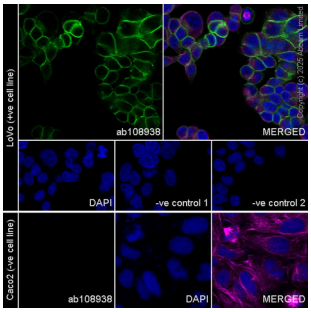


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-GPA33 antibody

Unpurified ab108938 showing negative staining in Normal tonsil tissue.

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



Immunocytochemistry/ Immunofluorescence - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Immunocytochemistry/ Immunofluorescence staining of LoVo (human colorectal adenocarcinoma epithelial cell) using rabbit Anti-GPA33 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized LoVo (human colorectal adenocarcinoma epithelial cell) cells labelling GPA33 with ab108938 at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed (ab150081) antibody at 1/1000 dilution (Green).

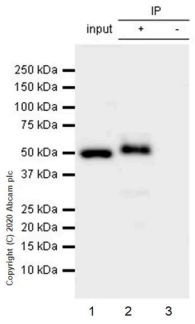
Confocal image showing membrane and weak cytoplasmic staining in LoVo cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue).

Low expression: Caco2.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Anti-alpha Tubulin mouse monoclonal antibody (ab7291) was used to counterstain tubulin at 1/1000 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed (ab150081) at 1/1000 dilution.



Immunoprecipitation - Anti-GPA33 antibody [EPR4240] (ab108938)

Purified ab108938 at 1:20 dilution (0.5ug) immunoprecipitating GPA33 in HT-29 whole cell lysate.
Lane 1 (input): HT-29 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate (10µg)

Lane 2 (+): ab108938 + HT-29 whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab108938 in HT-29 whole cell lysate.

VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000) was used for Western blotting.

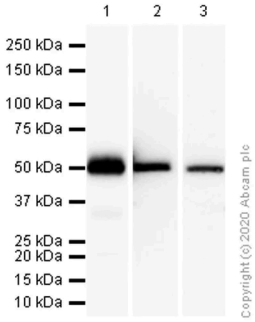
Blocking Buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM/TBST.

Observed band size: 50 kDa

All lanes:
Immunoprecipitation - Anti-GPA33 antibody [EPR4240] (ab108938)

Predicted band size: 36 kDa



Western blot - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Western blot staining using rabbit Anti-GPA33 antibody

Blocking/Diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-GPA33 antibody [EPR4240] (ab108938) at 1/1000 dilution

Lane 1:
Human colon lysates at 20 µg

Lane 2:
HT-29 (Human colorectal adenocarcinoma epithelial cell) whole cell lysates at 20 µg

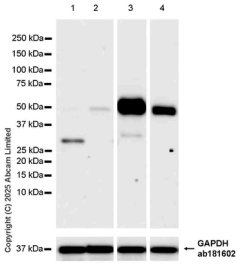
Lane 3:
MOLT-4 (Human lymphoblastic leukemia T lymphoblast) whole cell lysates at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 36 kDa

Observed band size: 50 kDa



Western blot - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Western blot staining using rabbit Anti-GPA33 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Low expression: Caco-2.

The identity of the lower MW bands at approximately 25 kDa (in lane 1 and 3) are unknown.

All lanes:
Western blot - Anti-GPA33 antibody [EPR4240] (ab108938) at 1/1000 dilution

Lane 1:
Caco-2 (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
HCT 116 (human colorectal carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
LoVo (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

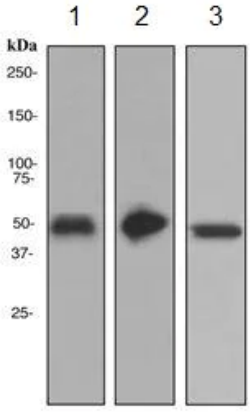
Lane 4:
THP-1 (human monocytic leukemia monocyte) whole cell lysate at 20 µg

Secondary

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

Observed band size: 35 kDa

Exposure time: 92s



Western blot - Anti-GPA33 antibody [EPR4240] (ab108938)

All lanes:
Western blot - Anti-GPA33 antibody [EPR4240] (ab108938) at 1/1000 dilution

Lane 1:
HT-29 lysate at 10 µg

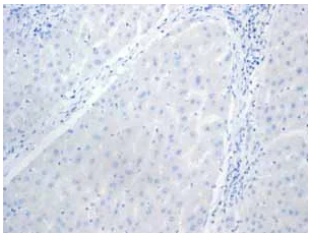
Lane 2:
Human small intestine lysate at 10 µg

Lane 3:
Human fetal colon lysates at 10 µg

Secondary

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

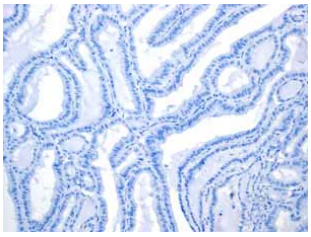
Predicted band size: 36 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPA33 antibody [EPR4240] (ab108938)

Unpurified ab108938 showing negative staining in Normal liver tissue.

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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPA33 antibody [EPR4240] (ab108938)

Unpurified ab108938 showing negative staining in Thyroid gland carcinoma tissue.

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

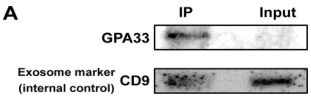


Image collected and cropped by CiteAb under a CC-BY license from the publication

Western blot - Anti-GPA33 antibody [EPR4240] (ab108938)

GPA33 Western blot staining using rabbit Anti-GPA33 antibody

GPA33 western blot using anti-GPA33 antibody [EPR4240] ab108938. Publication image and figure legend from Gotanda, K., Hirota, T., et al., 2016, Sci Rep, PubMed 27571936.

ab108938 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab108938 please see the product overview.

Immunoprecipitation experiments confirming the identification of intestine-derived exosomes.(A) GPA33 proteins in total exosomes and intestine-derived exosomes were detected by Western blot. CD9 is a marker of exosomes. (B) Tissue-specific miRNA levels in intestine-derived exosomes. MiR-192 and miR-215 are intestine-specific miRNAs and miR-122 is a liver-specific miRNA. Relative miRNA levels were determined by qRT-PCR. Each column represents the mean ± S.D. (n = 3). *p < 0.05, significantly different from the input. Input: total exosome samples, IP: Immunoprecipitated samples.

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