abcam

ab247720

Anti-GPA33 antibody [EPR4240] - 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	EPR4240
Purification technique	Affinity purification Protein A
Concentration	1.046 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	-
Notes	Heat up to 98 degree C, below boiling, and then let cool for 10-20 min.

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information GPA33

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

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

ab247720 is the carrier-free version of ab108938.

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.

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	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

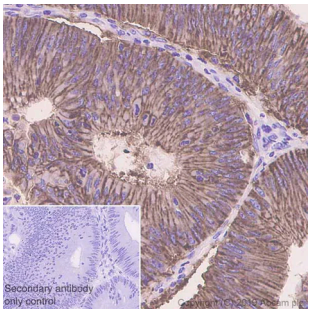
We do not recommend this combination. It is not covered by our product promise.

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.

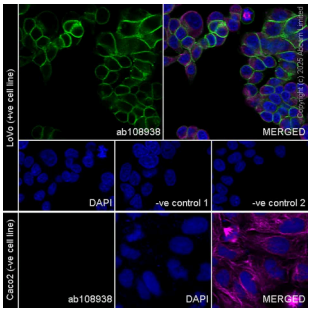
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-GPA33 antibody [EPR4240] - BSA and Azide free (ab247720)

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. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108938).



Immunocytochemistry/ Immunofluorescence - Anti-GPA33 antibody [EPR4240] - BSA and Azide free (ab247720)

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

This data was developed using ab108938, the same antibody clone in a different buffer formulation.
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).

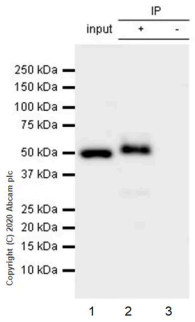
Confocal image showing membrane and weak cytoplasmic staining in LoVo cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue).

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] - BSA and Azide free (ab247720)

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.

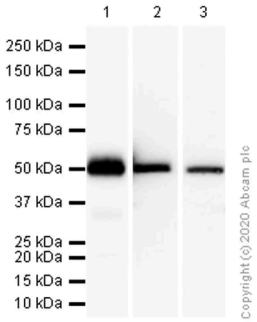
Diluting buffer and concentration: 5% NFDM/TBST.

Observed band size: 50 kDa

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108938).

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

Predicted band size: 36 kDa



Western blot - Anti-GPA33 antibody [EPR4240] - BSA and Azide free (ab247720)

GPA33 Western blot staining using rabbit Anti-GPA33 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108938).
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

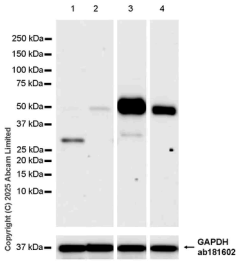
Lane 3:
MOLT-4 (Human lymphoblastic leukemia T lymphoblast) whole cell lysates at 20 µg

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] - BSA and Azide free (ab247720)

GPA33 Western blot staining using rabbit Anti-GPA33 antibody

This data was developed using ab108938, the same antibody clone in a different buffer formulation.
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

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