abcam

ab181829

Anti-Anterior Gradient 2 antibody [EPR3278] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR3278
Purification technique	Affinity purification Protein A
Concentration	1.005 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information AGR2

Function	Required for MUC2 post-transcriptional synthesis and secretion. May play a role in the production of mucus by intestinal cells (By similarity). Proto-oncogene that may play a role in cell migration, cell differentiation and cell growth. Promotes cell adhesion (PubMed:23274113).

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

ab181829 is the carrier-free version of ab76473.

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	Anterior Gradient 2 (AG2) also known as AGR2 is a protein with a molecular weight of approximately 20 kDa. This protein is a member of the protein disulfide isomerase family and has an important mechanical role in facilitating protein folding within the endoplasmic reticulum. The protein exists mainly in epithelial tissues and notably in the gastrointestinal tract with high expression also found in the pancreas and lungs. AG2 is characterized by its interaction with various client proteins assisting in their proper folding and stability.
Biological function summary	The anterior gradient protein influences cellular processes such as proliferation and differentiation often playing a role in cellular adhesion and migration. This protein does not work alone but instead can form complexes with other molecules enhancing its functional capabilities. Such interactions highlight its significance in maintaining normal cell physiology and response to external stimuli.
Pathways	Anterior gradient protein participates in key signaling pathways including the Wnt signaling pathway and the unfolded protein response (UPR). Through these pathways AG2 associates with proteins like β-catenin influencing gene transcription and cellular outcomes. In the UPR its role is important in managing cellular stress and maintaining homeostasis by regulating protein folding and quality control mechanisms.
Associated diseases and disorders	Anterior gradient protein shows strong associations with cancer particularly in tumors such as breast and lung cancer where it is often overexpressed. Its involvement links closely with proteins like MUC1 which is found in tumors suggesting a role in promoting cancer progression and metastasis. Additionally AG2 can be related to inflammatory bowel diseases where its dysregulation may result in epithelial barrier dysfunction and contribute to the pathology.

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

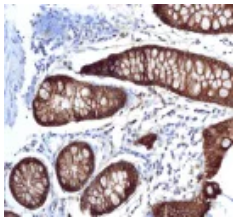
We do not recommend this combination. It is not covered by our product promise.

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

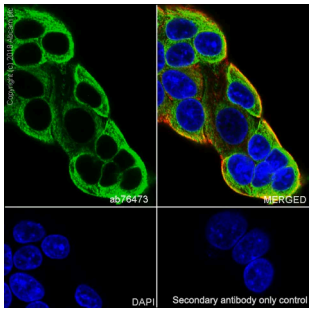


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Anterior Gradient 2 antibody [EPR3278] - BSA and Azide free (ab181829)

Anterior Gradient 2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Anterior Gradient 2 antibody

ab76473, at 1/500 dilution, staining Anterior Gradient 2 in paraffin-embedded human colon tissue by Immunohistochemistry.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab76473).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

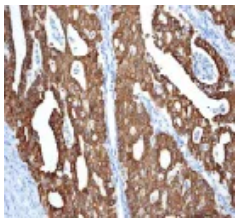


Immunocytochemistry/ Immunofluorescence - Anti-Anterior Gradient 2 antibody [EPR3278] - BSA and Azide free (ab181829)

Anterior Gradient 2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Anterior Gradient 2 antibody

Immunocytochemistry/ Immunofluorescence analysis of MCF7 (human breast adenocarcinoma epithelial cell) cells labeling Anterior Gradient 2 with purified ab76473 at 1/100 dilution (3.5 µg/mL). Cells were fixed in 100% Methanol. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL) was used as the secondary antibody only control.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab76473).

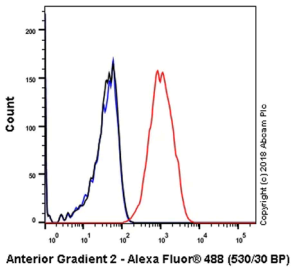


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Anterior Gradient 2 antibody [EPR3278] - BSA and Azide free (ab181829)

Anterior Gradient 2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Anterior Gradient 2 antibody

ab76473, at 1/500 dilution, staining Anterior Gradient 2 in paraffin-embedded human endometrium adenocarcinoma by Immunohistochemistry.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab76473).

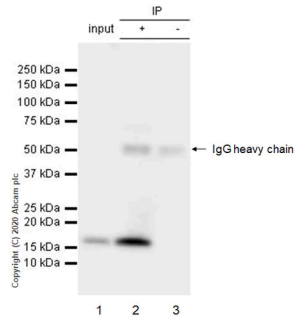
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Anterior Gradient 2 antibody [EPR3278] - BSA and Azide free (ab181829)

Anterior Gradient 2 Flow Cytometry (Intracellular) staining using rabbit Anti-Anterior Gradient 2 antibody

This data was developed using ab76473, the same antibody clone in a different buffer formulation. Intracellular Flow Cytometry analysis of HT-29 (Human colorectal adenocarcinoma epithelial cell) cells labeling Anterior Gradient 2 with purified ab76473 at 1/40 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cells without incubation with primary antibody and secondary antibody (Blue).



Immunoprecipitation - Anti-Anterior Gradient 2 antibody [EPR3278] - BSA and Azide free (ab181829)

This data was developed using ab76473, the same antibody clone in a different buffer formulation. Purified ab76473 at 1/20 dilution (2µg) immunoprecipitating Anterior Gradient 2 in HT-29 whole cell lysate.
Lane 1 (input): HT-29 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab76473 + HT-29 whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab76473 in HT-29 whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 17 kDa
All lanes:
Immunoprecipitation - Anti-Anterior Gradient 2 antibody [EPR3278] (ab76473)

Predicted band size: 19 kDa

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