abcam

ab249982

Anti-IMP3 antibody [EPR12021] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR12021
Purification technique	Affinity purification Protein A
Concentration	1.082 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information IGF2BP3

Function RNA-binding factor that may recruit target transcripts to cytoplasmic protein-RNA complexes (mRNPs). This transcript 'caging' into mRNPs allows mRNA transport and transient storage. It also modulates the rate and location at which target transcripts encounter the translational apparatus and shields them from endonuclease attacks or microRNA-mediated degradation. Preferentially binds to N6-methyladenosine (m6A)-containing mRNAs and increases their stability (PubMed:29476152). Binds to the 3'-UTR of CD44 mRNA and stabilizes it, hence promotes cell adhesion and invadopodia formation in cancer cells. Binds to beta-actin/ACTB and MYC transcripts. Increases MYC mRNA stability by binding to the coding region instability determinant (CRD) and binding is enhanced by m6A-modification of the CRD (PubMed:29476152). Binds to the 5'-UTR of the insulin-like growth factor 2 (IGF2) mRNAs.

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

ab249982 is the carrier-free version of ab177477.

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	IMP3 also known as IGF2BP3 is an oncofetal protein belonging to the insulin-like growth factor 2 mRNA-binding protein family. It has a molecular weight of around 65 kDa. IMP3 expresses in various tissues including embryonic tissues and several cancer types. In healthy adults the expression is minimal observed mostly in the testis placenta and some parts of the nervous system. It's significance in development and cancer makes it an important target for research.
Biological function summary	IMP3 plays a role in the regulation of mRNA stability localization and translation. It is a part of ribonucleoprotein complexes that facilitate these processes by binding to the 3' untranslated regions of target mRNAs. The protein influences the expression of genes involved in cell growth differentiation and migration. IMP3's ability to modulate mRNA fate contributes to cellular events essential for development and has implications in cancer progression.
Pathways	The involvement of IMP3 is significant in pathways like the insulin-like growth factor (IGF) signaling pathway and epithelial-mesenchymal transition (EMT). Within these pathways IMP3 modulates the activities of proteins such as IGF2 influencing cell proliferation and survival. Its participation in EMT is essential for processes like

metastasis in cancer cells linking it to broader biological processes that govern cell movement and identity change.

Associated diseases and disorders

High IMP3 expression associates with various cancers including pancreatic and ovarian cancers. It has been connected to the progression and poor prognosis of these cancers. In pancreatic cancer IMP3 can interact with proteins like IGF2 enhancing tumor growth and metastasis. This connection makes IMP3 a potential biomarker for cancer diagnostics and therapeutic targeting.

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

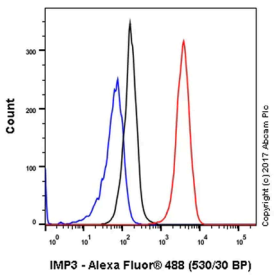
We do not recommend this combination. It is not covered by our product promise.

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.

6 product images

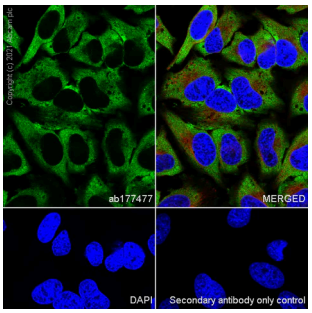


Flow Cytometry (Intracellular) - Anti-IMP3 antibody [EPR12021] - BSA and Azide free (ab249982)

IMP3 Flow Cytometry (Intracellular) staining using rabbit Anti-IMP3 antibody

This data was developed using ab177477, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of BxPC-3 (human pancreas adenocarcinoma) cells labeling with purified ab177477 at 1/300 dilution (10ug/ml) (Red). Cells were fixed with 80% methanol and permeabilised with 0.1% Tween-20. A Goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) (ab172730) was used

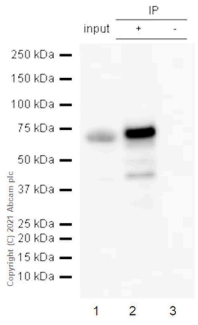
as a isotype control.Cell without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-IMP3 antibody [EPR12021] - BSA and Azide free (ab249982)

IMP3 Immunocytochemistry/ Immunofluorescence staining of HeLa (Human cervix adenocarcinoma epithelial cell) cells using rabbit Anti-IMP3 antibody

This data was developed using ab177477, the same antibody clone in a different buffer formulation. Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling IMP3 using ab177477. The cells were fixed with 4% paraformaldehyde then permeabilized with 0.1% Triton X-100. The cells were then incubated with ab177477 at 1:50 dilution followed by a further incubation with a Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 2 µg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI. Cells were counterstained using ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1:200 dilution (shown in red). Secondary antibody only control: PBS instead of the primary antibody.



Immunoprecipitation - Anti-IMP3 antibody [EPR12021] - BSA and Azide free (ab249982)

This data was developed using ab177477, the same antibody clone in a different buffer formulation. Immunoprecipitation of IMP3 from 293T (Human embryonic kidney epithelial cell) whole cell lysate using ab177477 at 1/20 dilution. Lane 1: 293T (Human embryonic kidney epithelial cell) whole cell lysate 10µg Lane 2: 293T whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab177477 in 293T whole cell lysate ab131366 was used as secondary antibody at 1/1000 dilution. Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Observed MW at 69kDa.
All lanes:
Immunoprecipitation - Anti-IMP3 antibody [EPR12021] (ab177477) at 1/20 dilution

Lane 1:
293T (Human embryonic kidney epithelial cell) whole cell lysate at 10 µg

Lane 2:
293T whole cell lysate

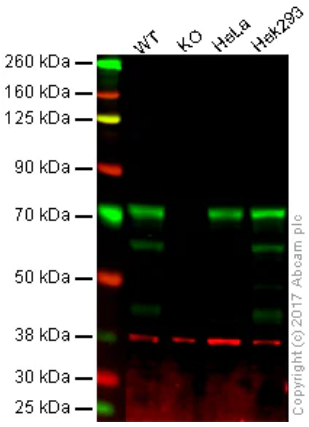
Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab177477 in 293T whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

Predicted band size: 63 kDa

Observed band size: 69 kDa



Western blot - Anti-IMP3 antibody [EPR12021] - BSA and Azide free (ab249982)

IMP3 Western blot staining using rabbit Anti-IMP3 antibody

This data was developed using ab177477, the same antibody clone in a different buffer formulation.
Lane 1: Wild-type HAP1 whole cell lysate (20 Âµg)

Lane 2: IGF2BP3 (IMP3) knockout HAP1 whole cell lysate (20 Âµg)

Lane 3: HeLa whole cell lysate (20 Âµg)

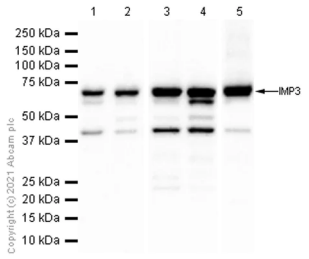
Lane 4: HEK293 whole cell lysate (20 Âµg)

Lanes 1 - 4: Merged signal (red and green). Green - ab177477 observed at 70 kDa. Red - loading control, ab9484, observed at 37 kDa.

ab177477 was shown to specifically react with IGF2BP3 (IMP3) in wild-type HAP1 cells along with additional cross-reactive bands. No band was observed when IGF2BP3 (IMP3) knockout cells were examined. Wild-type and IGF2BP3 (IMP3) knockout samples were subjected to SDS-PAGE. ab177477 and ab9484 (Mouse anti GAPDH loading control) were incubated overnight at 4Â°C at 1/1000 dilution and 1/20,000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye$^{Â®}$ 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye$^{Â®}$ 680RD) preabsorbed (ab216776) secondary antibodies at 1/20,000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-IMP3 antibody [EPR12021] (ab177477)

Predicted band size: 63 kDa



Western blot - Anti-IMP3 antibody [EPR12021] - BSA and Azide free (ab249982)

All lanes:
Western blot - Anti-IMP3 antibody [EPR12021] (ab177477) at 1/10000 dilution

Lane 1:
MDA-MB-231 (Human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
MDA-MB-435S (Human mammary gland ductal carcinoma melanocyte) whole cell lysate at 20 µg

Lane 3:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate at 20 µg

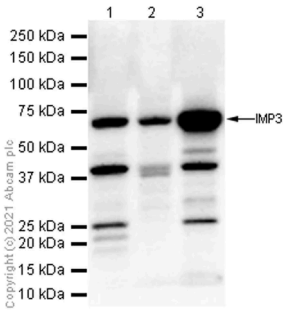
Lane 5:
Mouse placenta lysate at 20 µg

Secondary

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

Predicted band size: 63 kDa

Observed band size: 69 kDa



Western blot - Anti-IMP3 antibody [EPR12021] - BSA and Azide free (ab249982)

This data was developed using ab177477, the same antibody clone in a different buffer formulation. Blocking and diluting buffer and concentration: 5% NFDM/TBST. We are unsure about the nature of the extra bands.
All lanes:
Western blot - Anti-IMP3 antibody [EPR12021] (ab177477) at 1/10000 dilution

Lane 1:
Mouse spleen lysate at 20 µg

Lane 2:
Rat heart lysate at 20 µg

Lane 3:
Rat spleen lysate at 20 µg

Secondary

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

Predicted band size: 63 kDa

Observed band size: 69 kDa

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