abcam

ab250497

Anti-Connexin 32 / GJB1 antibody [EPR8036(2)] - 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	EPR8036(2)
Purification technique	Affinity purification Protein A
Concentration	1.013 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

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information GJB1

Function	One gap junction consists of a cluster of closely packed pairs of transmembrane channels, the connexons, through which materials of low MW diffuse from one cell to a neighboring cell.

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

ab250497 is the carrier-free version of ab181374.

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	Connexin 32 also known as GJB1 is a gap junction protein with a molecular mass of approximately 32 kDa. This protein facilitates direct intercellular communication by forming gap junction channels that allow ions and small molecules to pass between adjacent cells. Connexin 32 is expressed in various tissues including liver pancreas and many types of epithelial cells. Its expression ensures cells can synchronize their activities important for maintaining tissue homeostasis.
Biological function summary	Connexin 32 plays a significant role in maintaining cellular communication networks. This protein forms hexameric complexes called connexons which dock with connexons of adjacent cells to create functional gap junction channels. These channels are essential in processes such as maintaining homeostasis cell differentiation and synchronized contraction of tissues like cardiac muscle. The structural formation allows direct transfer of metabolites and signaling molecules highlighting its importance in multicellular organism function.
Pathways	Connexin 32 actively contributes to cellular communication and metabolic coordination. It participates in the phosphoinositide 3-kinase (PI3-K) pathway and the ERK/MAPK signaling pathway which are important for cell growth proliferation and apoptosis. Connexin 32 interacts with proteins like Connexin 43 with both proteins playing roles in channel assembly and intracellular signaling processes that influence cellular responses to external stimuli.
Associated diseases and disorders	Connexin 32's dysfunction aligns with specific neuropathies. Mutations in the GJB1 gene often lead to X-linked Charcot-Marie-Tooth disease a disorder affecting peripheral nerves. This disease involves degeneration of nerve fibers disrupting muscle function and sensation and connects with proteins that share functional pathways like PMP22. Additionally Connexin 32 has implications in liver diseases where its reduced expression correlates with disrupted hepatocyte communication affecting liver function and regeneration.

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

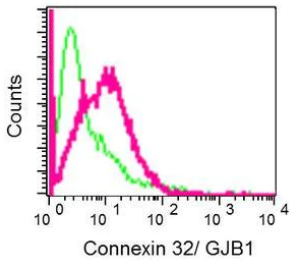
We do not recommend this combination. It is not covered by our product promise.

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.

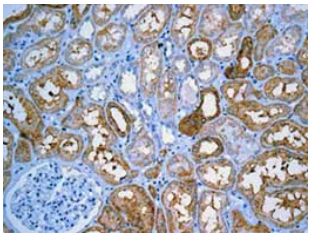
3 product images



Flow Cytometry - Anti-Connexin 32 / GJB1 antibody [EPR8036(2)] - BSA and Azide free (ab250497)

Connexin 32 / GJB1 Flow Cytometry staining using rabbit Anti-Connexin 32 / GJB1 antibody

This data was developed using ab181374, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of MCF-7 cells labeling Connexin 32 / GJB1 with ab181374 at 1/10 dilution (red) compared to a rabbit IgG negative control (green).

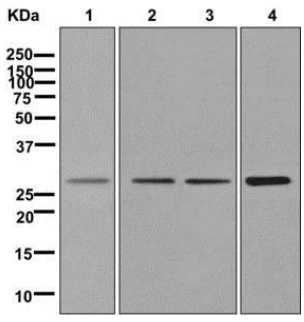


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Connexin 32 / GJB1 antibody [EPR8036(2)] - BSA and Azide free (ab250497)

Connexin 32 / GJB1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Connexin 32 / GJB1 antibody

This data was developed using ab181374, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling Connexin 32 / GJB1 with ab181374 at 1/100 dilution.

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



Western blot - Anti-Connexin 32 / GJB1 antibody [EPR8036(2)] - BSA and Azide free (ab250497)

This data was developed using ab181374, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Connexin 32 / GJB1 antibody [EPR8036(2)] (ab181374) at 1/1000 dilution

Lane 1:
Human skeletal muscle lysate at 10 µg

Lane 2:

Fetal liver tissue lysate at 10 µg

Lane 3:
MCF-7 lysate at 10 µg

Lane 4:
Human stomach lysate at 10 µg

Predicted band size: 32 kDa

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