abcam

ab249506

Anti-B3GALT4 antibody [EPR11650] - 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	EPR11650
Purification technique	Affinity purification Protein A

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information B3GALT4

Function	Involved in GM1/GD1B/GA1 ganglioside biosynthesis.

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

ab249506 is the carrier-free version of ab169759.

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	B3GALT4 also known as beta-13-galactosyltransferase-4 is a glycosyltransferase enzyme that plays an important role in glycosylation processes. This enzyme facilitates the transfer of galactose from UDP-galactose to the terminal N-acetylglucosamine of glycoproteins and glycolipids forming a beta-13 bond. B3GALT4 has a molecular mass of approximately 42 kDa. Expression of B3GALT4 occurs in various tissues including the brain liver and kidney indicating its extensive involvement across different physiological systems.
Biological function summary	The enzyme B3GALT4 contributes to the synthesis of glycan structures. It participates in the glycosphingolipid biosynthesis pathway where it has involvement in the addition of galactose to lactosylceramide. By doing so B3GALT4 helps in transforming lactosylceramide into more complex glycolipids which are components of cell membranes and mediate cell-cell interactions. This enzyme is not known as part of a larger complex but it acts independently within the glycosylation machinery.
Pathways	B3GALT4 functions within the glycosphingolipid metabolism and the N-glycan biosynthesis pathways. It contributes to the complexity and diversity of glycan structures that are key in these pathways. B3GALT4 interacts with other glycosyltransferases such as beta-14-galactosyltransferase in orchestrating the stepwise extension of oligosaccharide chains. Understanding these pathways offers insight into how B3GALT4 contributes to essential cellular functions like cell signaling and immune response.
Associated diseases and disorders	B3GALT4 dysregulation associates with GM1 gangliosidosis and Morquio syndrome type B. GM1 gangliosidosis results from the accumulation of GM1 gangliosides due to insufficient breakdown often influenced by abnormal glycosylation from B3GALT4 activity. This disorder connects B3GALT4 with the lysosomal enzyme beta-galactosidase which is directly involved in degrading glycolipids. In Morquio syndrome type B mutations impacting glycosylation pathways suggest an indirect link to B3GALT4's enzymatic processes ultimately contributing to skeletal abnormalities.

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

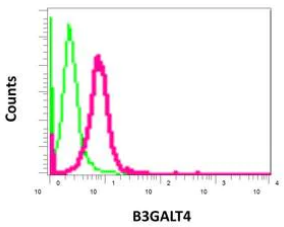
We do not recommend this combination. It is not covered by our product promise.

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.

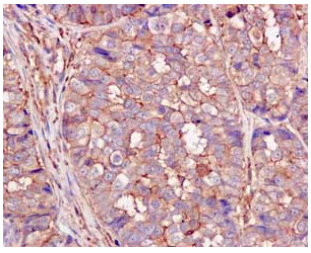
4 product images



Flow Cytometry (Intracellular) - Anti-B3GALT4 antibody [EPR11650] - BSA and Azide free (ab249506)

B3GALT4 Flow Cytometry (Intracellular) staining using rabbit Anti-B3GALT4 antibody

This data was developed using ab169759, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling B3GALT4 with ab169759 at 1/10 dilution (red) or a rabbit IgG (negative) (green).

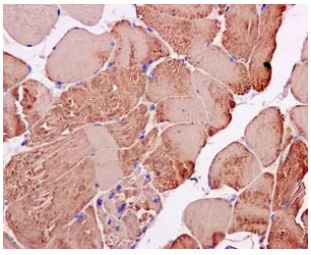


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-B3GALT4 antibody [EPR11650] - BSA and Azide free (ab249506)

B3GALT4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-B3GALT4 antibody

This data was developed using ab169759, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labeling B3GALT4 with ab169759 at 1/50 dilution.

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

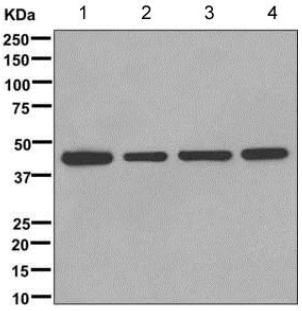


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-B3GALT4 antibody [EPR11650] - BSA and Azide free (ab249506)

B3GALT4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-B3GALT4 antibody

This data was developed using ab169759, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human muscle tissue labeling B3GALT4 with ab169759 at 1/50 dilution.

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



Western blot - Anti-B3GALT4 antibody [EPR11650] - BSA and Azide free (ab249506)

This data was developed using ab169759, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-B3GALT4 antibody [EPR11650] (ab169759) at 1/10000 dilution

Lane 1:
Fetal tissue lysate at 10 µg

Lane 2:
PC-3 cell lysate at 10 µg

Lane 3:
Jurkat cell lysate at 10 µg

Lane 4:
U87-MG cell lysate at 10 µg

Predicted band size: 42 kDa

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