abcam

ab249240

Anti-GALE antibody [EPR11088(B)] - 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	EPR11088(B)
Purification technique	Affinity purification

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, 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 GALE

Function	Catalyzes two distinct but analogous reactions: the reversible epimerization of UDP-glucose to UDP-galactose and the reversible epimerization of UDP-N-acetylglucosamine to UDP-N-acetylgalactosamine. The reaction with UDP-Gal plays a critical role in the Leloir pathway of galactose catabolism in which galactose is converted to the glycolytic intermediate glucose 6-phosphate. It contributes to the catabolism of dietary galactose and enables the endogenous biosynthesis of both UDP-Gal and UDP-GalNAc when exogenous sources are limited. Both UDP-sugar interconversions are important in the synthesis of glycoproteins and glycolipids.

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

ab249240 is the carrier-free version of ab155997.

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	'GALE' also known as UDP-galactose-4-epimerase is an enzyme that plays a critical role in carbohydrate metabolism. It weighs approximately 38 kDa and is expressed in various tissues across the body. This enzyme is responsible for the interconversion of UDP-galactose and UDP-glucose essential in the Leloir pathway of galactose metabolism. GALE's activity is necessary for maintaining balanced sugar levels and genetic mutations in this protein can lead to significant metabolic issues.
Biological function summary	UDP-galactose-4-epimerase facilitates the conversion of galactose-1-phosphate to UDP-galactose a reaction occurring in the utilization of galactose obtained from diet. This enzyme is not part of a larger protein complex but operates independently to mediate the transformation of sugars. Its activity helps in the synthesis of glycoproteins and glycolipids which are fundamental to various cellular functions including cell signaling and adhesion.
Pathways	GALE is an important component in the galactose metabolism pathway. It ensures the proper function of carbohydrate interconversion processes important for energy production and biomolecule synthesis. GALE interrelates with other enzymes like GALT (galactose-1-phosphate uridyltransferase) and GALK1 (galactokinase 1) which together facilitate the orderly breakdown and use of galactose in cells. Disruption in its function can affect these interconnected pathways leading to metabolic imbalances.
Associated diseases and disorders	Deficiencies or mutations in GALE lead to type III galactosemia which is characterized by the body's inability to properly manage galactose. This genetic disorder can cause symptoms such as jaundice cataracts and developmental delays. GALE's relationship with GALT another enzyme implicated in classic galactosemia (type I) highlights an interconnected network where disruptions in similar pathways can result in metabolic dysfunctions. Careful monitoring of these enzymes is necessary in managing and understanding the metabolic disorders tied to galactose metabolism.

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.

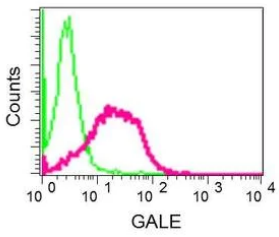
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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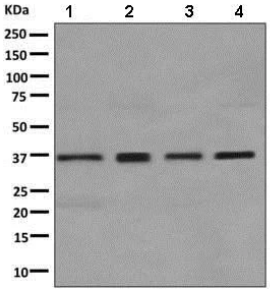
2 product images



Flow Cytometry (Intracellular) - Anti-GALE antibody [EPR11088(B)] - BSA and Azide free (ab249240)

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

This data was developed using ab155997, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized HeLa cells labeling GALE with ab155997 at 1/10 dilution (red) compared to a rabbit IgG negative control (green).



Western blot - Anti-GALE antibody [EPR11088(B)] - BSA and Azide free (ab249240)

GALE Western blot staining using rabbit Anti-GALE antibody

This data was developed using ab155997, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-GALE antibody [EPR11088(B)] - BSA and Azide free (ab249240) at 1/10000 dilution

Lane 1:
HepG2 cell lysate at 10 µg

Lane 2:
A375 cell lysate at 10 µg

Lane 3:
MCF7 cell lysate at 10 µg

Lane 4:
HeLa cell lysate at 10 µg

Secondary

All lanes:

HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 38 kDa

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