abcam

ab203651

Alexa Fluor® 647 Anti-PFKFB3 antibody [EPR12594]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12594
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human

Dilution info	1/1000
Notes	This product gave a positive signal in HeLa cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min).

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Expected

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

IHC-P

Expected

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PFKFB3

Function	Catalyzes both the synthesis and degradation of fructose 2,6-bisphosphate.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Stable for 12 months at -20°C, Store in the dark

Notes

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.

Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.com.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	PFKFB3 also known as 6-phosphofructo-2-kinase/fructose-26-bisphosphatase 3 serves a significant role in regulating glycolysis. This bifunctional enzyme weighs approximately 58 kDa and manages levels of fructose-26-bisphosphate a potent activator of another enzyme called phosphofructokinase-1. PFKFB3 expression occurs in various tissues but is especially high in areas with active cell proliferation like the brain and tumors. This enzyme's activity affects glycolytic flux critical for

	energy production and biosynthesis especially under conditions requiring rapid energy supply.
Biological function summary	PFKFB3 regulates cellular energy metabolism serving as a switch for converting carbohydrates into energy and building blocks for growth. This enzyme is part of a glycolytic complex coordinating energy needs during proliferation and survival. Its activity is important in processes demanding increased energy and anabolic precursors such as cell division. The enzyme's modulation affects fructose-26-bisphosphate levels influencing cellular responses to stress and nutrient availability directly impacting metabolic adaptation.
Pathways	PFKFB3 integrates into the glycolytic pathway and the pentose phosphate pathway. PFKFB3's control over fructose-26-bisphosphate levels influences phosphofructokinase-1 modulating the glycolytic pathway's rate. This modulation impacts energy production efficiency and the provision of metabolites required for nucleotide synthesis linking to the pentose phosphate pathway. Proline-rich AKT substrate of 40 kDa (PRAS40) and AKT may also interact indirectly to regulate PFKFB3 activity in these metabolic pathways.
Associated diseases and disorders	PFKFB3 links strongly to cancer and diabetes. Its upregulation in cancerous tissues supports tumor growth by promoting glycolysis known as the Warburg effect. Cancer-associated proteins such as KRAS often rely on PFKFB3's glycolytic control to sustain proliferative signaling. Additionally in diabetes altered PFKFB3 activity can contribute to insulin resistance due to disrupted metabolic homeostasis with insulin pathway proteins like IRS1 potentially interacting with it in this context.

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

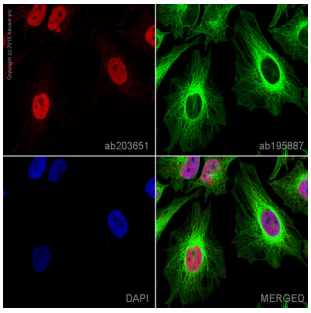
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-PFKFB3 antibody [EPR12594] (ab203651)

PFKFB3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PFKFB3 antibody

ab203651 staining PFKFB3 in HeLa cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab at a 1/1000 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at a 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in HeLa cells fixed with 100% methanol (5 min).

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