abcam

ab309855

Alexa Fluor® 488 Anti-SDHB antibody [EPR13042(B)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
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	EPR13042(B)
Purification technique	Affinity purification Protein A

Reactivity data

Target Binding Affinity

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.

Notes	-

Antibody Labelling

Expected

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

Flow Cyt (Intra)

Expected

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

IHC-P

Expected

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

Target data

See full target information SDHB

Function	Iron-sulfur protein (IP) subunit of the succinate dehydrogenase complex (mitochondrial respiratory chain complex II), responsible for transferring electrons from succinate to ubiquinone (coenzyme Q) (PubMed:26925370, PubMed:27604842). SDH also oxidizes malate to the non-canonical enol form of oxaloacetate, enol-oxaloacetate (By similarity). Enol-oxaloacetate, which is a potent inhibitor of the succinate dehydrogenase activity, is further isomerized into keto-oxaloacetate (By similarity).

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	Avoid freeze / thaw cycle, 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.

How are conjugated primary antibodies validated?
This conjugated primary antibody is released using a quantitative quality control method that evaluates binding affinity post-conjugation and efficiency of antibody labeling.
For suitable applications and species reactivity, please refer to the unconjugated version of this clone.

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.

Supplementary info

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

Activity summary	The protein SDHB also known as Succinate Dehydrogenase Complex Iron Sulfur Subunit B plays a mechanical role as a component of the succinate dehydrogenase (SDH) enzyme. This subunit has a molecular mass of approximately 30 kDa. SDHB is part of the mitochondrial inner membrane where it is expressed in high levels across various tissues including heart kidney and muscle. It contributes to the electron transport chain by facilitating the oxidation of succinate to fumarate an important step in energy production through the tricarboxylic acid (TCA) cycle.

Biological function summary	SDHB participates in the succinate dehydrogenase complex acting within both the TCA cycle and the electron transport chain. By transferring electrons to coenzyme Q it helps generate an electrochemical gradient important for ATP synthesis. This complex also called Complex II includes other subunits such as SDHA SDHC and SDHD. Their interactions ensure proper function of metabolic processes within mitochondria bridging the gap between foundational energy metabolism and complex cellular processes.
Pathways	SDHB plays an important role in cellular respiration and metabolic cycles. It resides in the TCA cycle and the mitochondrial electron transport chain connecting its function to energy generation pathways. Specifically SDHB relates closely to SDHA and coenzyme Q all working together to facilitate electron transfer and effective mitochondrial energy output. The transfer of electrons through this pathway highlights its essential contribution to maintaining cellular energy homeostasis.
Associated diseases and disorders	SDHB mutations are associated with conditions such as paraganglioma and pheochromocytoma. These genetic alterations disrupt normal complex II function leading to the accumulation of succinate and succinate-related oncogenesis. In addition to causing tumor development defective SDHB is linked with familial paraganglioma syndromes. Its interaction with proteins such as SDHA and SDHD critical for the succinate dehydrogenase functionality highlights its significant role in maintaining metabolic balance and when defective contributing to disease pathogenesis.

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.

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