abcam

ab250066

Anti-DLST antibody [EPR13319(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	EPR13319(B)
Purification technique	Affinity purification
Concentration	0.969 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

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 DLST

Function	Dihydrolipoamide succinyltransferase (E2) component of the 2-oxoglutarate dehydrogenase complex. The 2-oxoglutarate dehydrogenase complex catalyzes the overall conversion of 2-oxoglutarate to succinyl-CoA and CO(2). The 2-oxoglutarate dehydrogenase complex is mainly active in the mitochondrion (PubMed:29211711, PubMed:30929736). A fraction of the 2-oxoglutarate dehydrogenase complex also localizes in the nucleus and is required for lysine succinylation of histones: associates with KAT2A on chromatin and provides succinyl-CoA to histone succinyltransferase KAT2A (PubMed:29211711).

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

ab250066 is the carrier-free version of ab178692.

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	DLST also known as dihydrolipoamide S-succinyltransferase is an essential component of the 2-oxoglutarate dehydrogenase complex (OGDC). It possesses a molecular mass of approximately 48 kDa. Expressed primarily in mitochondrial matrices within mammalian tissues DLST plays a mechanical role in catalyzing the transfer of succinyl groups to coenzyme-A from S-succinyldihydrolipoyllysine. The target is integral to the energy metabolism processes occurring within cells especially in tissues with high energy demands such as the heart and skeletal muscles.
Biological function summary	The DLST enzyme acts within the tricarboxylic acid (TCA) cycle also known as the Krebs cycle or citric acid cycle. It forms a critical part of the multi-enzyme complex OGDC facilitating the oxidative decarboxylation of 2-oxoglutarate an important step in the TCA cycle. Through this action DLST helps produce succinyl-CoA a molecule pivotal for energy and biosynthetic processes. The activity of this protein ensures continuous energy supply and intermediary metabolite flow within cellular respiration.
Pathways	DLST plays a significant role within both the TCA cycle and the broader metabolic pathway of oxidative phosphorylation. These are important for efficient cellular energy production connecting many metabolic reactions and facilitating ATP generation. OGDC where DLST performs its function interacts with various proteins such as E1 (2-oxoglutarate dehydrogenase) and E3 (dihydrolipoamide

	dehydrogenase). This interaction is necessary to efficiently process and interconvert energy substrates for cellular use.
Associated diseases and disorders	DLST has been implicated in conditions such as neurodegenerative diseases including Alzheimer's disease. Alterations in DLST activity or expression can lead to energy production defects contributing to the metabolic disturbances observed in these conditions. Additionally mutations or dysregulation within the OGDC complex featuring DLST are associated with some forms of cancer where metabolic reprogramming occurs. In both contexts the interaction between DLST and other complex components such as E3 displays potential involvement in disease mechanisms marking it as a target worth studying for therapeutic interventions.

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

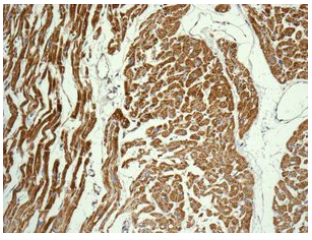
We do not recommend this combination. It is not covered by our product promise.

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

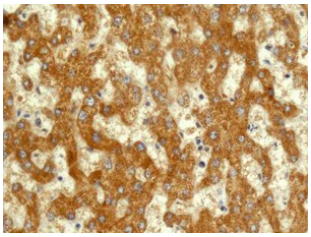


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DLST antibody [EPR13319(B)] - BSA and Azide free (ab250066)

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

This data was developed using ab178692, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human heart tissue labeling DLST with ab178692 at 1/100 dilution.

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

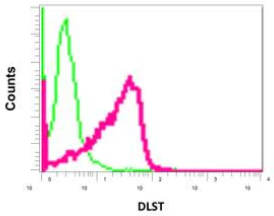


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DLST antibody [EPR13319(B)] - BSA and Azide free (ab250066)

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

This data was developed using ab178692, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling DLST with ab178692 at 1/100 dilution.

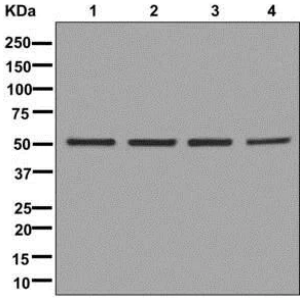
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-DLST antibody [EPR13319(B)] - BSA and Azide free (ab250066)

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

This data was developed using ab178692, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized HeLa cells labeling DLST with ab178692 at 1/10 dilution (red) compared to a rabbit IgG negative control (green).



Western blot - Anti-DLST antibody [EPR13319(B)] - BSA and Azide free (ab250066)

DLST Western blot staining using rabbit Anti-DLST antibody

This data was developed using ab178692, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-DLST antibody [EPR13319(B)] (ab178692) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
MCF-7 cell lysate at 10 µg

Lane 4:

293T cell lysate at 10 µg

Predicted band size: 49 kDa

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