abcam

ab180943

Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12483
Purification technique	Affinity purification Protein A
Concentration	0.105 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Recombinant fragment - Human
Dilution info	1/1000 - 1/10000
Notes	-

Species	Human

Dilution info	1/1000 - 1/10000
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Human
Dilution info	1/100
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Target data

See full target information ENO2

Function	Enolase that catalyzes the conversion of 2-phosphoglycerate to phosphoenolpyruvate in glycolysis and the reverse reaction in gluconeogenesis (By similarity). Has neurotrophic and neuroprotective properties on a broad spectrum of central nervous system (CNS) neurons. Binds, in a calcium-dependent manner, to cultured neocortical neurons and promotes cell survival (By similarity).

Storage

Shipped at conditions	Conditional Ambient
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

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.

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	Neuron-specific enolase (NSE) also known simply as enolase-2 is a glycolytic enzyme with a molecular weight of approximately 47 kDa. This protein mainly facilitates the conversion of 2-phosphoglycerate to phosphoenolpyruvate in the glycolytic pathway. NSE is expressed significantly in neural tissues and neuroendocrine cells. Researchers often utilize it in various assays including NSE IHC and NSE ELISA to assess its expression levels in different tissue types.
Biological function summary	NSE plays a major role in cellular metabolism particularly in neurons where it aids energy production through glycolysis. It forms part of a dimeric complex bonding typically with itself or other enolase isoforms for proper function. As an important enzyme in the metabolic pathway NSE helps ensure neurons and associated cells maintain energy homeostasis which is fundamental for sustenance and normal cellular functions.
Pathways	NSE is an integral component of glycolysis a metabolic pathway pivotal in cellular energy production. The process collaborates closely with other glycolytic enzymes like pyruvate kinase and hexokinase to facilitate efficient energy release from glucose. Through these interactions NSE guarantees the smooth continuation of glycolysis highlighting its importance within cellular metabolism frameworks.
Associated diseases and disorders	NSE serves as a marker for neuroblastoma and small cell lung cancer. Elevated NSE levels suggest potential malignancies due to its release into the bloodstream from damaged neural and neuroendocrine cells. Moreover it often appears alongside proteins like neuron-specific markers such as synaptophysin in diagnostic assays. Understanding its involvement in these conditions helps clinicians diagnose and monitor the progression of certain cancers effectively.

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

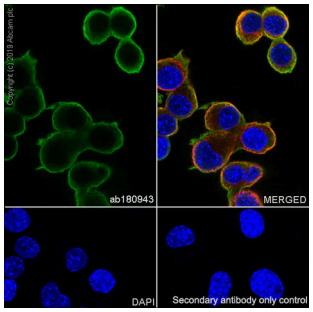
We do not recommend this combination. It is not covered by our product promise.

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.

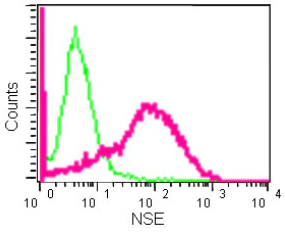
7 product images



Immunocytochemistry/ Immunofluorescence - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943)

ENO1 + ENO2 + ENO3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ENO1 + ENO2 + ENO3 antibody

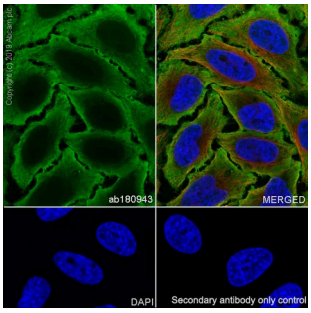
Immunocytochemistry/ Immunofluorescence analysis of Ramos (human Burkitt's lymphoma B lymphocyte) cells labeling Tcl1 with purified ab225718 at 1/50 (2.6 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943)

ENO1 + ENO2 + ENO3 Flow Cytometry (Intracellular) staining using rabbit Anti-ENO1 + ENO2 + ENO3 antibody

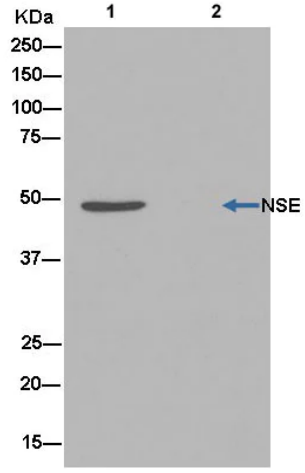
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed U87-MG cells labeling NSE with ab180943 at 1/10 dilution (red) compared to a Rabbit monoclonal IgG Isotype control (green), followed by Goat anti rabbit IgG (FITC) secondary antibody at 1/150 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943)

ENO1 + ENO2 + ENO3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ENO1 + ENO2 + ENO3 antibody

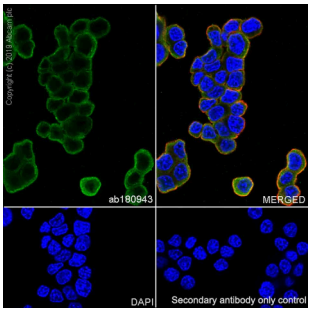
Immunocytochemistry/ Immunofluorescence analysis of Raji (human Burkitt's lymphoma B lymphocyte) cells labeling CD23 with purified ab135386 at 1/25 (7.48 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunoprecipitation - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943)

Western blot analysis of HepG2 cell lysate immunoprecipitated using ab180943 at 1/50 dilution (Lane 1). Lane 2: Negative control. Anti-Rabbit IgG (HRP) secondary antibody, specific to the non-reduced form of IgG, used at 1/1500 dilution.
All lanes:
Immunoprecipitation - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943)

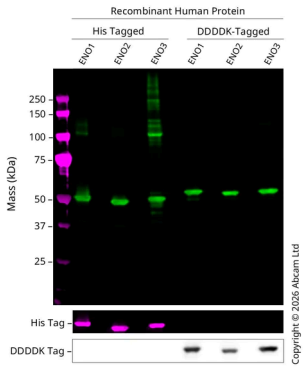
Predicted band size: 47 kDa



Immunocytochemistry/ Immunofluorescence - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943)

ENO1 + ENO2 + ENO3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ENO1 + ENO2 + ENO3 antibody

Immunocytochemistry/ Immunofluorescence analysis of NIH/3T3 (mouse embryonic fibroblast) cells labeling alpha smooth muscle Actin with purified ab150301 at 1/100(1.65 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Western blot - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943)

ENO1 + ENO2 + ENO3 Western blot staining using rabbit Anti-ENO1 + ENO2 + ENO3 antibody

Western blot: Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] ab180943 staining at 1/1000 dilution, shown in green; Mouse anti-6x HisTag (ab18184) loading control staining at 1/20,000 dilution, shown in magenta.

To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3pc Milk in TBS-0.1 % Tween 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution. For DDDDK-tag detection, HRP Anti-DDDDK tag (Binds to FLAG® tag sequence) antibody [M2] (ab49763) was used at 1/1000 dilution and developed using the ECL technique.

Exposure time for DDDDK tag : 0.1s.

All lanes:
Western blot - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943) at 1/1000 dilution

Lane 1:
ENO1 Recombinant Protein (His Tag) at 0.2 µg

Lane 2:
ENO2 Recombinant Protein (His Tag) at 0.2 µg

Lane 3:
ENO3 Recombinant Protein (His Tag) at 0.2 µg

Lane 4:
ENO1 Recombinant Protein (DDDDK Tag) at 0.2 µg

Lane 5:
ENO2 Recombinant Protein (DDDDK Tag) at 0.2 µg

Lane 6:
ENO3 Recombinant Protein (DDDDK Tag) at 0.2 µg

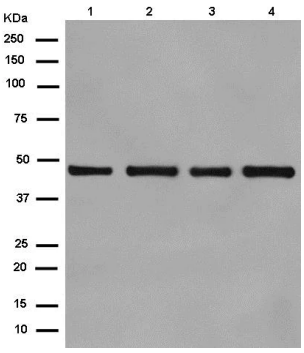
Secondary

Lanes 1 - 6:
Goat anti-Mouse 680RD at 1/20000 dilution

Lanes 1 - 6:
Goat anti-Rabbit 800CW at 1/20000 dilution

Developed using the ECL technique.

Observed band size: 50 kDa



Western blot - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943)

ENO1 + ENO2 + ENO3 Western blot staining using rabbit Anti-ENO1 + ENO2 + ENO3 antibody

All lanes:
Western blot - Anti-ENO1 + ENO2 + ENO3 antibody [EPR12483] (ab180943) at 1/5000 dilution

Lane 1:
Fetal brain lysate at 20 µg

Lane 2:
HeLa cell lysate at 20 µg

Lane 3:
SH-SY5Y cell lysate at 20 µg

Lane 4:
U87-MG cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Predicted band size: 47 kDa

Observed band size: 47 kDa

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