abcam

ab199829

Alexa Fluor® 647 Anti-ENO1 + ENO2 + ENO3 antibody [EPR3377] - Neuronal Marker

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	EPR3377
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	1/200
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

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

IHC-P

Expected

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

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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

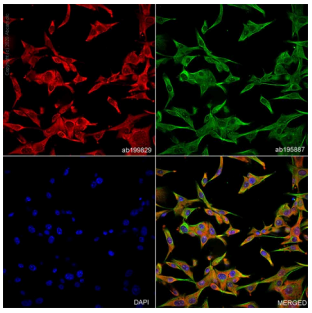
We do not recommend this combination. It is not covered by our product promise.

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.

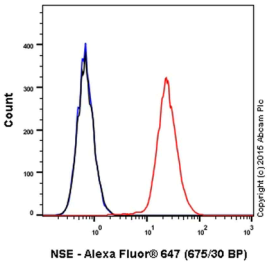
2 product images



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-ENO1 + ENO2 + ENO3 antibody [EPR3377] - Neuronal Marker (ab199829)

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

ab199829 staining ENO1 + ENO2 + ENO3 in U87MG cells. The cells were fixed with 100% methanol (5min), 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 ab199829 at 1/100 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 2µg/ml (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal high-content analyser (Perkin Elmer, Operetta).



Flow Cytometry (Intracellular) - Alexa Fluor® 647 Anti-ENO1 + ENO2 + ENO3 antibody [EPR3377] - Neuronal Marker (ab199829)

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

Overlay histogram showing U-87MG cells stained with ab199829 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab199829, 1/50 dilution) for 30 min at 22°C. Isotype control antibody (black line) was rabbit monoclonal IgG [EPR25A] Alexa Fluor® 647 (ab199093) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a solid-state 25mW red diode laser (635 nm) and 675/30 bandpass filter. This antibody gave a positive signal in U-87MG cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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