abcam

Product datasheet

Anti-Optineurin antibody [EPR23059-124] ab242146

Recombinant RabMAb

4 Images

Overview

Product name	Anti-Optineurin antibody [EPR23059-124]
Description	Rabbit monoclonal [EPR23059-124] to Optineurin
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P **Unsuitable for:** ICC/IF or IP
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human brain and Hela lysates. IHC-P: Human cerebrum tissue. Flow Cyt (intra): HeLa cells.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR23059-124
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab242146 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/50.
WB		1/1000. Predicted molecular weight: 66 kDa.
IHC-P		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Application notes Is unsuitable for ICC/IF or IP.

Target

Function Plays an important role in the maintenance of the Golgi complex, in membrane trafficking, in exocytosis, through its interaction with myosin VI and Rab8. Links myosin VI to the Golgi complex and plays an important role in Golgi ribbon formation. Negatively regulates the induction of IFNB in response to RNA virus infection. Plays a neuroprotective role in the eye and optic nerve. Probably part of the TNF-alpha signaling pathway that can shift the equilibrium toward induction of cell death. May act by regulating membrane trafficking and cellular morphogenesis via a complex that contains Rab8 and hungtingtin (HD). May constitute a cellular target for adenovirus E3 14.7, an inhibitor of TNF-alpha functions, thereby affecting cell death.

Tissue specificity Present in acqueous humor of the eye (at protein level). Highly expressed in trabecular meshwork. Expressed nonpigmented ciliary epithelium, retina, brain, adrenal cortex, fetus, lymphocyte, fibroblast, skeletal muscle, heart, liver, brain and placenta.

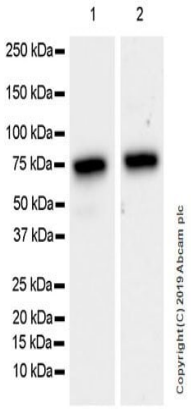
Involvement in disease Defects in OPTN are the cause of primary open angle glaucoma type 1E (GLC1E) [MIM:137760]. Primary open angle glaucoma (POAG) is characterized by a specific pattern of optic nerve and visual field defects. The angle of the anterior chamber of the eye is open, and usually the intraocular pressure is increased. The disease is asymptomatic until the late stages, by which time significant and irreversible optic nerve damage has already taken place.
Defects in OPTN are a cause of susceptibility to normal pressure glaucoma (NPG) [MIM:606657].
Defects in OPTN are the cause of amyotrophic lateral sclerosis type 12 (ALS12) [MIM:613435]. It is a neurodegenerative disorder affecting upper motor neurons in the brain and lower motor neurons in the brain stem and spinal cord, resulting in fatal paralysis. Sensory abnormalities are absent. Death usually occurs within 2 to 5 years. The etiology of amyotrophic lateral sclerosis is likely to be multifactorial, involving both genetic and environmental factors. The disease is inherited in 5-10% of the cases.

Domain Ubiquitin-binding motif (UBAN) is essential for its inhibitory function, subcellular localization and interaction with TBK1.

Post-translational modifications Phosphorylated. Phosphorylation is induced by phorbol esters and decreases its half-time.

Cellular localization Cytoplasm > perinuclear region. Golgi apparatus. Golgi apparatus > trans-Golgi network. Found in the perinuclear region and associates with the Golgi apparatus. Colocalizes with MYO6 and RAB8 at the Golgi complex and in vesicular structures close to the plasma membrane.

Images



Western blot - Anti-Optineurin antibody [EPR23059-124] (ab242146)

All lanes : Anti-Optineurin antibody [EPR23059-124] (ab242146) at 1/1000 dilution

Lane 1 : Human brain lysate
Lane 2 : Hela (human cervix adenocarcinoma epithelial cell) lysate

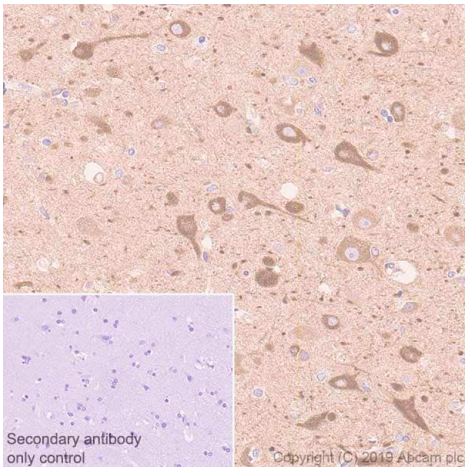
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 66 kDa
Observed band size: 74 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST
The molecular weight observed is consistent with what has been described in the literature (PMID: 27620379).

Exposure time: Lane 1: 15 seconds Lane 2: 70 seconds

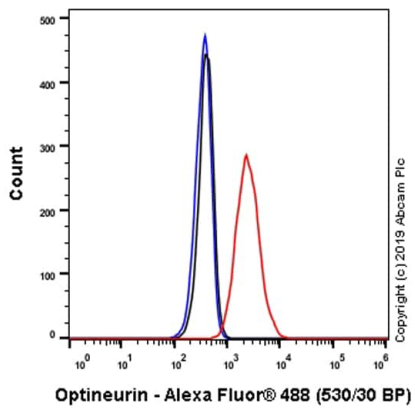


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Optineurin antibody [EPR23059-124] (ab242146)

Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling Optineurin with ab242146 at 1/500 dilution (0.98 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Cytoplasmic staining on human cerebrum. The section was incubated with ab242146 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND®RX instrument. Counterstained with Hematoxylin.

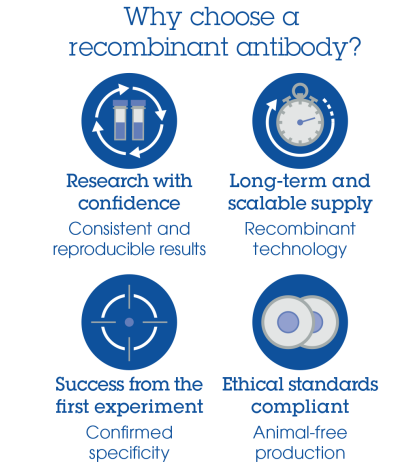
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins.



Flow Cytometry (Intracellular) - Anti-Optineurin antibody [EPR23059-124] (ab242146)

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervix adenocarcinoma) cells labelling Optineurin with ab242146 at 1/50 (Red) compared with a Rabbit monoclonal IgG (**ab172730**, Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor®488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.



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