Product datasheet

Anti-Optineurin antibody ab23666

Review

3 stars, 3 Abreviews, 20 References, 3 Images

Overview

Product name: Anti-Optineurin antibody
Description: Rabbit polyclonal to Optineurin
Host species: Rabbit
Tested applications: Suitable for: ICC/IF, WB, ICC
Species reactivity: Reacts with: Mouse, Rat, Human
Predicted to work with: Cow, Pig, Cynomolgus monkey, Macaque monkey
Immunogen: Synthetic peptide. This information is considered to be commercially sensitive.
Positive control: Murine or human heart, brain, or fibroblast lysates.

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer: pH: 7.40
Constituents: 66% Sodium chloride, 25% Tris
Purity: Protein A purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab23666 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>WB</td>
<td>★★★☆☆☆☆☆</td>
<td>1/200. Detects a band of approximately 75 kDa (predicted molecular weight: 74 kDa).</td>
</tr>
<tr>
<td>ICC</td>
<td>★★★☆☆☆☆☆</td>
<td>Use at an assay dependent concentration.</td>
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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 IFNβ 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 huntingtin (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 aqueous 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**

**Images**
Anti-Optineurin antibody (ab23666) at 1 µg + Human skeletal muscle tissue lysate - total protein (ab29330) at 10 µg

Secondary
Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 74 kDa
Observed band size: 75 kDa

why is the actual band size different from the predicted?

Additional bands at: 24 kDa, 43 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 1 minute
ab23666 staining Optineurin in HeLa cells and Retinal Ganglion Cell line 5 cells (RGC-5) by Immunocytochemistry/Immunofluorescence.

(A) HeLa cells were pulsed with Alexa-546® conjugated transferrin for 30 minutes, chased with unlabeled holo-transferrin for 20 minutes and stained for endogenous Optineurin.

(B) RGC-5 cells were stained for endogenous Optineurin.

ab23666 staining Optineurin in Mouse cultured primary hippocampal neurons by Immunocytochemistry/Immunofluorescence. Cells were PFA-fixed and permeabilized in 0.25% Triton in PBS prior to blocking in 5% Donkey serum for 30 minutes at 22°C. The primary antibody was diluted 1/50 and incubated with the sample for 2 hours at 22°C. The secondary antibody was Cy3®-conjugated Donkey anti-Rabbit polyclonal, diluted 1/500.

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