abcam

Product datasheet

Anti-beta III Tubulin antibody - C-terminal ab230847

4 Images

Overview

Product name	Anti-beta III Tubulin antibody - C-terminal
Description	Rabbit polyclonal to beta III Tubulin - C-terminal
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-Fr, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Cow, Chimpanzee
Immunogen	Synthetic peptide within Human beta III Tubulin (C terminal). The exact sequence is proprietary. Conjugated to a protein carrier. Database link: Q13509
Positive control	WB: Mouse brain tissue extract; rat brain tissue extract; HeLa and SK-N-SH whole cell extracts. IHC-Fr: E13.5 rat brain tissue. ICC/IF: SK-N-SH cells.

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: 7.00 Constituents: PBS, 20% Glycerol
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab230847** in the following tested applications.

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

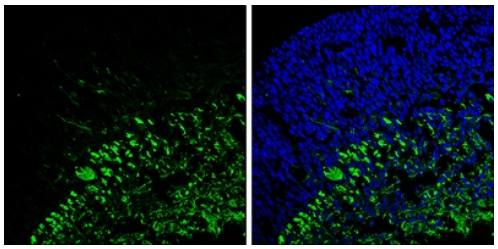
Application	Abreviews	Notes
WB		1/5000 - 1/20000. Predicted molecular weight: 50 kDa.

Application	Abreviews	Notes
IHC-Fr		1/100 - 1/1000.
ICC/IF		1/100 - 1/1000.

Target

Function	Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha-chain. TUBB3 plays a critical role in proper axon guidance and mantainance.
Tissue specificity	Expression is primarily restricted to central and peripheral nervous system.
Involvement in disease	Defects in TUBB3 are the cause of congenital fibrosis of extraocular muscles type 3A (CFEOM3A) [MIM:600638]. A congenital ocular motility disorder marked by restrictive ophthalmoplegia affecting extraocular muscles innervated by the oculomotor and/or trochlear nerves. It is clinically characterized by anchoring of the eyes in downward gaze, ptosis, and backward tilt of the head. Congenital fibrosis of extraocular muscles type 3 presents as a non-progressive, autosomal dominant disorder with variable expression. Patients may be bilaterally or unilaterally affected, and their oculo-motility defects range from complete ophthalmoplegia (with the eyes fixed in a hypo- and exotropic position), to mild asymptomatic restrictions of ocular movement. Ptosis, refractive error, amblyopia, and compensatory head positions are associated with the more severe forms of the disorder. In some cases the ocular phenotype is accompanied by additional features including developmental delay, corpus callosum agenesis, basal ganglia dysmorphism, facial weakness, polyneuropathy.
Sequence similarities	Belongs to the tubulin family.
Domain	The highly acidic C-terminal region may bind cations such as calcium.
Post-translational modifications	Some glutamate residues at the C-terminus are polyglutamylated. This modification occurs exclusively on glutamate residues and results in polyglutamate chains on the gamma-carboxyl group. Also monoglycylated but not polyglycylated due to the absence of functional TTLL10 in human. Monoglycylation is mainly limited to tubulin incorporated into axonemes (cilia and flagella) whereas glutamylation is prevalent in neuronal cells, centrioles, axonemes, and the mitotic spindle. Both modifications can coexist on the same protein on adjacent residues, and lowering glycylation levels increases polyglutamylation, and reciprocally. The precise function of such modifications is still unclear but they regulate the assembly and dynamics of axonemal microtubules.
Cellular localization	Cytoplasm > cytoskeleton.

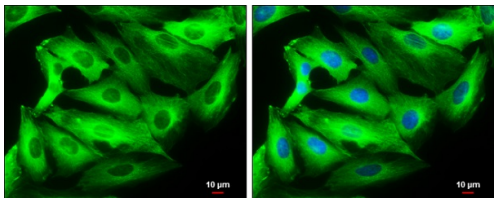
Images



Immunohistochemistry (Frozen sections) - Anti-beta III Tubulin antibody - C-terminal (ab230847)

Frozen sectioned E13.5 rat brain tissue stained for beta III Tubulin (green) with ab230847 at 1/250 dilution in immunohistochemical analysis.

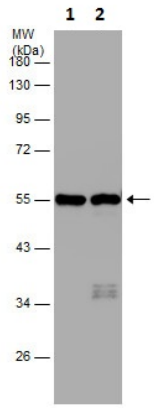
Blue: Fluoroshield with DAPI



Immunocytochemistry/ Immunofluorescence - Anti-beta III Tubulin antibody - C-terminal (ab230847)

SK-N-SH (human neuroblastoma cell line) cells stained for beta III Tubulin (green) using ab230847 at 1/1000 dilution in ICC/IF. Cells were fixed in 4% paraformaldehyde at RT for 15 minutes.

Blue: Hoechst 33342 staining.



Western blot - Anti-beta III Tubulin antibody - C-terminal (ab230847)

All lanes : Anti-beta III Tubulin antibody - C-terminal (ab230847) at 1/10000 dilution

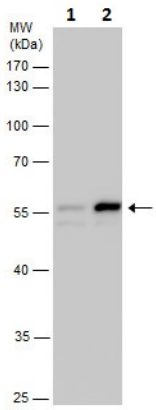
Lane 1 : Mouse brain tissue extract
Lane 2 : Rat brain tissue extract

Lysates/proteins at 10 µg per lane.

Developed using the ECL technique.

Predicted band size: 50 kDa

10% SDS-PAGE



Western blot - Anti-beta III Tubulin antibody - C-terminal (ab230847)

All lanes : Anti-beta III Tubulin antibody - C-terminal (ab230847) at 1/10000 dilution

Lane 1 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell extract
Lane 2 : SK-N-SH (human neuroblastoma cell line) whole cell extract

Lysates/proteins at 20 µg per lane.

Developed using the ECL technique.

Predicted band size: 50 kDa

10% SDS-PAGE

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