abcam

Product datasheet

Anti-beta III Tubulin (phospho S172) antibody ab76286

3 References 2 Images

Overview

Product name	Anti-beta III Tubulin (phospho S172) antibody
Description	Rabbit polyclonal to beta III Tubulin (phospho S172)
Host species	Rabbit
Specificity	The ab76286 sequence is identical to similar regions in bI, bII, and bIII tubulin isotypes.
Tested applications	**Suitable for:** ICC/IF, WB, ELISA
Species reactivity	**Reacts with:** Human **Predicted to work with:** a wide range of other species
Immunogen	Synthetic phospho peptide corresponding to amino acid residues around serine 172 of human beta III Tubulin conjugated to KLH
Positive control	C2C12 cells; purified brain tubulin treated with ERK2 kinase.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 50% Glycerol, PBS
Purity	Immunogen affinity purified
Purification notes	ab76286 was cross adsorbed to unphosphorylated beta III Tubulin (Ser 172) peptide before affinity purification using phospho beta III Tubulin (Ser 172) peptide (without carrier).
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab76286** in the following tested applications.

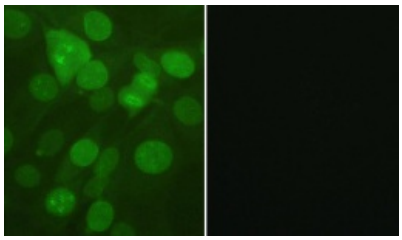
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		1/100.
WB		1/1000. Predicted molecular weight: 38 kDa.
ELISA		1/2000.

Target

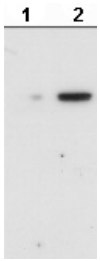
Function	Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha-chain. TUBB3 plays a critical role in proper axon guidance and mantainance.
Tissue specificity	Expression is primarily restricted 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



Immunocytochemistry/ Immunofluorescence - Anti-beta III Tubulin (phospho S172) antibody (ab76286)

ab76286, at a 1/100 dilution, staining beta III Tubulin in C2C12 cells by Immunoflurescence.
Image 1: untreated.
Image 2: in the presence of the phospho peptide.



Western blot - Anti-beta III Tubulin (phospho S172) antibody (ab76286)

All lanes : Anti-beta III Tubulin (phospho S172) antibody (ab76286) at 1/1000 dilution

Lane 1 : purified brain tubulin, untreated
Lane 2 : purified brain tubulin, treated with ERK2 kinase to phosphorylate
Ser 172

Predicted band size: 38 kDa
Observed band size: 50 kDa
why is the actual band size different from the predicted?

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