abcam

Product datasheet

Recombinant Human beta Tubulin protein ab70187

3 References 2 Images

Description

Product name	Recombinant Human beta Tubulin protein
Purity	> 70 % Densitometry. Purity is lot specific. Please contact our technical Support team for details.
Expression system	Escherichia coli
Accession	P07437
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	76 kDa including tags
Amino acids	1 to 444
Tags	GST tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab70187** in the following tested applications.

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

Applications	Western blot SDS-PAGE
Form	Liquid

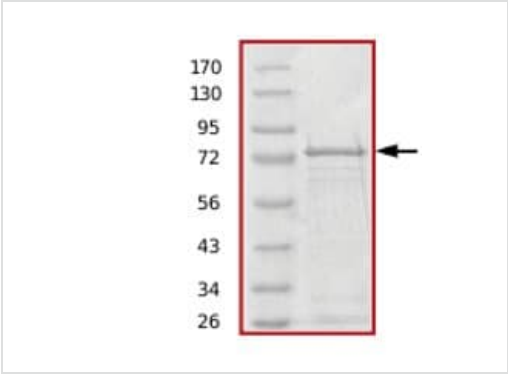
Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.002% PMSF, 0.004% DTT, 0.79% Tris HCl, 25% Glycerol (glycerin, glycerine), 0.88% Sodium chloride, 0.31% Glutathione, 0.003% EDTA

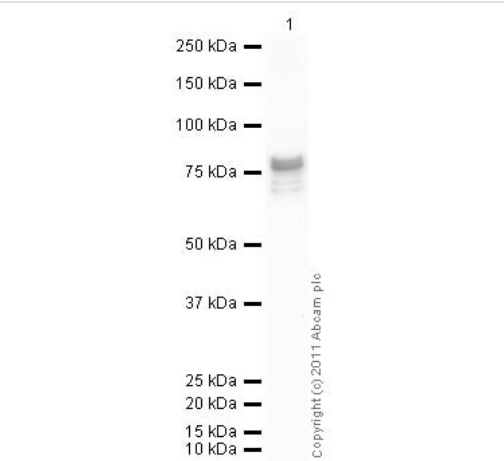
General Info

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.
Tissue specificity	Ubiquitously expressed with highest levels in spleen, thymus and immature brain.
Involvement in disease	Cortical dysplasia, complex, with other brain malformations 6 Skin creases, congenital symmetric circumferential, 1
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, resulting in polyglutamate chains on the gamma-carboxyl group (PubMed:26875866). Polyglutamylation plays a key role in microtubule severing by spastin (SPAST). SPAST preferentially recognizes and acts on microtubules decorated with short polyglutamate tails: severing activity by SPAST increases as the number of glutamates per tubulin rises from one to eight, but decreases beyond this glutamylation threshold (PubMed:26875866). Some glutamate residues at the C-terminus are 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). Both polyglutamylation and monoglycylation can coexist on the same protein on adjacent residues, and lowering glycylation levels increases polyglutamylation, and reciprocally. The precise function of monoglycylation is still unclear. Phosphorylated on Ser-172 by CDK1 during the cell cycle, from metaphase to telophase, but not in interphase. This phosphorylation inhibits tubulin incorporation into microtubules.
Cellular localization	Cytoplasm, cytoskeleton.

Images



SDS-PAGE - Recombinant Human beta Tubulin protein (ab70187)



Western blot - Recombinant Human beta Tubulin protein (ab70187)

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