Datasheet for ABIN112505

anti-TUBA1B antibody

11 Publications

Go to Product page

Overview

Quantity:	0.1 mg
Target:	TUBA1B
Reactivity:	All Species
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This TUBA1B antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunohistochemistry (Frozen Sections) (IHC (fro)), Enzyme Immunoassay (EIA), Immunoprecipitation (IP)

Product Details

Immunogen:	Fraction of tubulin purified from pig brain by two cycles of polymerization-depolymerization
Clone:	TU-01
Isotype:	IgG1
Specificity:	The antibody recognizes the defined epitope (aa 65-97) on N-terminal structural domain of alpha Tubulin. Reacts with all species (recognized epitope conserved within all species).
Purification:	Precipitation Methods

Target Details

Target:	TUBA1B
Alternative Name:	alpha Tubulin / TUBA1B (TUBA1B Products)

Target Details

Background:	The microtubules are intracellular dynamic polymers made up of evolutionarily conserved polymorphic alpha/beta-tubulin heterodimers and a large number of microtubule-associated proteins (MAPs). The microtubules consist of 13 protofilaments and have an outer diameter 25 nm. Microtubules have their intrinsic polarity, highly dynamic plus ends and less dynamic minus ends. Microtubules are required for vital processes in eukaryotic cells including mitosis, meiosis, maintenance of cell shape and intracellular transport. Microtubules are also necessary for movement of cells by means of flagella and cilia. In mammalian tissue culture cells microtubules have their minus ends anchored in microtubule organizing centers (MTOCs).The GTP (guanosintriphosphate) molecule is an essential for tubulin heterodimer to associate with other heterodimers to form microtubule. In vivo, microtubule dynamics vary considerably. Microtubule polymerization is reversible and a populations of microtubules in cells are on their minus ends either growing or shortening, this phenomenon is called dynamic instability of microtubules. On a practical level, microtubules can easily be stabilized by the addition of non-hydrolysable analogues of GTP (eg. GMPPCP) or morecommonly by anti-cancer drugs such as Taxol. Taxol stabilizes microtubules at room temperature for many hours. Using limited proteolysis by enzymes both tubulin subunits can be divided into N-terminal and C-terminal structural domains. The alpha-tubulin (relative molecular weight about 50 kDa) is globular protein that exists in cells as part of soluble alpha/beta-tubulin dimer or it is polymerized into microtubules. In different species it is coded by multiple tubulin genes that form tubulin classes (in human 6 genes). Expressed tubulin genes are named tubulin isotypes. Some of the tubulin isotypes are expressed ubiquitously, while some have more restricted tissue expression. Alpha-tubulin is also subject of numerous post-translational modifications. Tubulin isotypes and their posttranslational modifications are responsible for multiple tubulin charge variants - tubulin isoforms. Heterogeneity of alpha-tubulin is concentrated in C-terminal structuraldomain.Synonyms: Alpha-tubulin ubiquitous, Tubulin K-alpha-1, Tubulin alpha-1B chain, Tubulin alpha-ubiquitous chain
Gene ID:	10376
NCBI Accession:	NP_006073
UniProt:	P68363
Pathways:	Microtubule Dynamics, M Phase

Application Details

Application Notes:	Western Blotting (Reducing conditions): Recommended Dilution: 1-2 µg/mL,Incubation Time: 60 min, room temperature. Positive Control: HPB-ALL peripheral blood leukemia cell lysate

Application Details

	(incubation 60 min)Porcine brain lysate (incubation 90 min). Sample preparation: Resuspend approx.50 mil. cells in 1 mLcold Lysis buffer(1 % laurylmaltoside in 20 mM Tris/Cl, 100 mM NaCl pH 8.2, 50 mM NaF including Proteaseinhibitor Cocktail). Incubate 60 min on ice. Centrifuge to remove cell debris. Mix lysatewith reducing Laemmli SDS-PAGE sample buffer. Immunocytochemistry: Recommended Dilution: DY547 conjugate: 2-3 µg/mL, FITC conjugate: 3 µg/mL. Staining technique: fixed and permeabilized cells. Clone TU-01 has also been described to work in Immunohistochemistry, ELISA andImmunoprecipitation. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Restrictions:	For Research Use only

Handling

Concentration:	1.0 mg/mL
Buffer:	PBS, pH ~7.4, 15 mM Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	4 °C/-20 °C
Storage Comment:	Store undiluted at 2-8 °C for one month or (in aliquots) at -20 °C for longer.

Publications

Product cited in:	Lukas, Mazna, Valenta, Doubravska, Pospichalova, Vojtechova, Fafilek, Ivanek, Plachy, Novak, Korinek: "Dazap2 modulates transcription driven by the Wnt effector TCF-4." in: **Nucleic acids research**, Vol. 37, Issue 9, pp. 3007-20, (2009) (PubMed). Eisendle, Grabner, Kutzner, Zelger: "Possible role of Borrelia burgdorferi sensu lato infection in lichen sclerosus." in: **Archives of dermatology**, Vol. 144, Issue 5, pp. 591-8, (2008) (PubMed). Kukharskyy, Sulimenko, Mac?rek, Sulimenko, Dráberová, Dráber: "Complexes of gamma-tubulin with nonreceptor protein tyrosine kinases Src and Fyn in differentiating P19 embryonal carcinoma cells." in: **Experimental cell research**, Vol. 298, Issue 1, pp. 218-28, (2004) (PubMed).

Smertenko, Blume, Viklický, Dráber: "Exposure of tubulin structural domains in Nicotiana tabacum microtubules probed by monoclonal antibodies." in: **European journal of cell biology**, Vol. 72, Issue 2, pp. 104-12, (1997) (PubMed).

Smertenko, Blume, Viklický, Opatrný, Dráber: "Post-translational modifications and multiple tubulin isoforms in Nicotiana tabacum L. cells." in: **Planta**, Vol. 201, Issue 3, pp. 349-58, (1997) (PubMed).

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