Datasheet for ABIN93892

anti-alpha Tubulin antibody (FITC)

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Overview

Quantity:	0.1 mg
Target:	alpha Tubulin (TUBA1)
Reactivity:	Human, Mouse, Pig, Saccharomyces cerevisiae, Arabidopsis, Nicotiana tabacum, Paramecium, Turkey, Eisenia fetida
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This alpha Tubulin antibody is conjugated to FITC
Application:	Immunocytochemistry (ICC), Flow Cytometry (FACS)

Product Details

Immunogen:	Fraction of tubulin purified from porcine brain by two cycles of polymerization - depolymerization.
Clone:	TU-01
Isotype:	IgG1
Specificity:	The antibody TU-01 recognizes a defined epitope (aa 65-97) on N-terminal structural domain of alpha-tubulin.
Cross-Reactivity (Details):	Broad species reactivity
Purification:	Purified antibody is conjugated with fluorescein isothiocyanate (FITC) under optimum conditions and unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.

Target Details

Target:	alpha Tubulin (TUBA1)
Alternative Name:	alpha-tubulin (TUBA1 Products)
Background:	Tubulin alpha 1,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 more commonly 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 around 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 structural domain.,TUBA
Gene ID:	7277
UniProt:	Q71U36
Pathways:	Microtubule Dynamics

Application Details

Application Notes:	Flow cytometry: Recommended dilution: 1-4 µg/mL. Intracellular staining.
Comment:	The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum

Application Details

	conditions. The reagent is free of unconjugated FITC.
Restrictions:	For Research Use only

Handling

Concentration:	1 mg/mL
Buffer:	Phosphate buffered saline (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:	**Do not freeze.** Avoid prolonged exposure to light.
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Protect from prolonged exposure to light. Do not freeze.

Publications

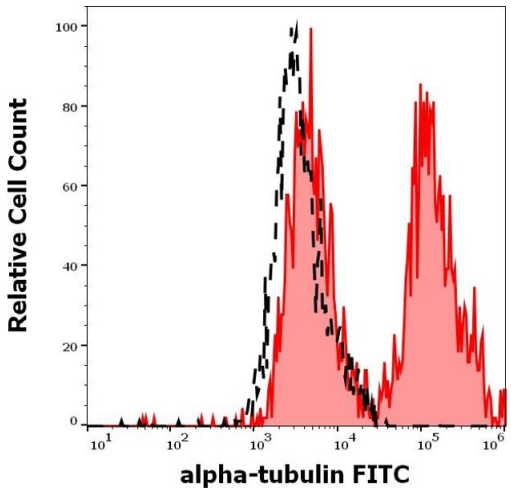
Product cited in:	Lukas, Mazna, Valenta, Doubravska, Pospichalova, Vojtechova, Fafilek, Ivanek, Plachy, Novak, Korinek: "Dazap2 modulates transcription driven by the Wnt effector TCF-4." in: **Nucleic acids research**, Vol. 37, Issue 9, pp. 3007-20, (2009) (PubMed). Kukharskyy, Sulimenko, Mac?rek, Sulimenko, 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, 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). 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).

Publications

Nováková, Dráberová, Schürmann, Czihak, Viklický, Dr-aber: "gamma-Tubulin redistribution in taxol-treated mitotic cells probed by monoclonal antibodies." in: **Cell motility and the cytoskeleton**, Vol. 33, Issue 1, pp. 38-51, (1996) (PubMed).

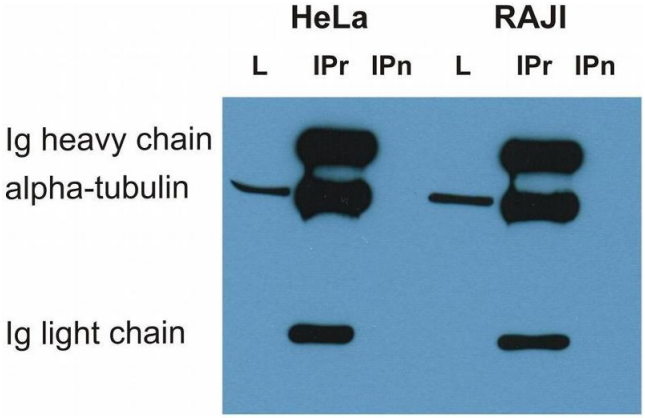
There are more publications referencing this product on: Product page

Images



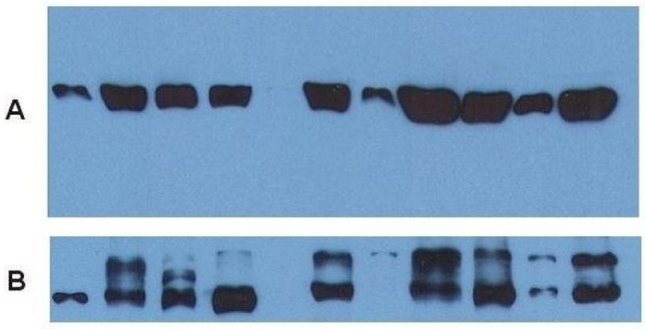
Flow Cytometry

Image 1. Separation of HeLa cells stained using anti-human alpha-tubulin (TU-01) FITC antibody (concentration in sample 5 µg/mL, red-filled) from HeLa cells stained using mouse IgG1 isotype control (MOPC-21) FITC antibody (concentration in sample 5 µg/mL, same as alpha-tubulin FITC concentration, black-dashed) in flow cytometry analysis (intracellular staining) of HeLa cell suspension.



Western Blotting

Image 2. Use of anti-alpha-tubulin antibody as a loading control (A) in an Western blotting experiment revealing the staining pattern ofvarious cell lysates by a newly developed monoclonal antibody (B).



Western Blotting

Image 3. Use of anti-alpha-tubulin antibody as a loading control (A) in an Western blotting experiment revealing the staining pattern ofvarious cell lysates by a newly developed monoclonal antibody (B).

Please check the product details page for more images. Overall 8 images are available for ABIN93892.