Datasheet for ABIN192340

anti-TUBB antibody

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Overview

Quantity:	0.1 mg
Target:	TUBB
Reactivity:	Human, Mouse, Pig, Plant
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This TUBB antibody is un-conjugated
Application:	Western Blotting (WB), Immunocytochemistry (ICC), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	beta-tubulin from porcine brain
Clone:	TU-13
Isotype:	IgM
Specificity:	The antibody TU-13 recognizes an epitope on N-terminal structural domain of beta-tubulin in various species.
Cross-Reactivity (Details):	Human, Porcine, Mouse, Plants
Purification:	Purified by sequential steps of physicochemical fractionation (differential precipitation and solid-phase chromatography methods).
Purity:	> 95 % (by SDS-PAGE)

Target Details

Target:	TUBB
Alternative Name:	beta-tubulin (TUBB Products)
Background:	Tubulin beta,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 beta-tubulin (relative molecular weight around 50 kDa) is counterpart of alpha-tubulin in tubulin heterodimer. It is coded by multiple tubulin genes and it is also posttranslationally modified. Heterogeneity of subunit is concentrated in C-terminal structural domain.,TUBB
Gene ID:	81027
UniProt:	Q9H4B7
Pathways:	Microtubule Dynamics, M Phase

Application Details

Application Notes:	Western blotting: Recommended dilution: 1-2 µg/mL, reducing conditions.
Restrictions:	For Research Use only

Handling

Concentration:	1 mg/mL

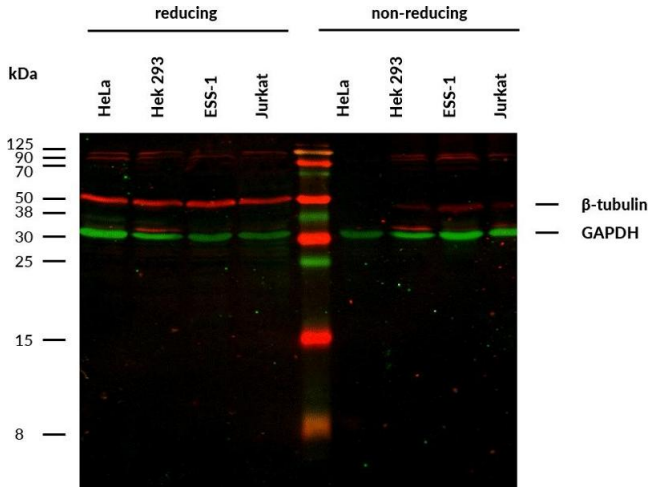
Handling

Buffer:	Tris buffered saline (TBS), pH 8.0, 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.**
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Do not freeze.

Publications

Product cited in:	Dráber, Vater, Böhm, Kuklova, Unger: "Inhibition of microtubule assembly in vitro by anti-tubulin monoclonal antibodies." in: **FEBS letters**, Vol. 262, Issue 2, pp. 209-11, (1990) (PubMed). Dráber, Lagunowich, Dráberová, Viklický, Damjanov: "Heterogeneity of tubulin epitopes in mouse fetal tissues." in: **Histochemistry**, Vol. 89, Issue 5, pp. 485-92, (1988) (PubMed).

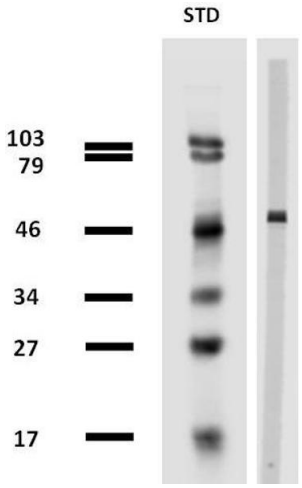
Images



Western Blotting

Image 1. Anti-beta-Tubulin Purified (TU-13) works in WB application under reducing conditions. Western blotting analysis was performed on whole cell extracts (RIPA lysis buffer) of HeLa, HEK 293, ESS-1 and Jurkat cell lines mixed and heated (100 °C, 5 min) with reducing (2-mercaptoethanol) or non-reducing SDS-loading buffer. Samples were resolved using 12 % Tris-glycine SDS gel electrophoresis. Nitrocellulose membrane blot was probed simultaneously with mouse IgM monoclonal antibody TU-13 (1 µg/mL) and mouse IgG1 anti-GAPDH monoclonal antibody FF26A (1 µg/mL) used as the loading control. Subclass-specific secondary antibodies IRDye 680RD Goat-anti-Mouse IgM (red) and IRDye 800CW Goat-anti-Mouse IgG (green) were used for multiplex fluorescent Western blot

detection. Beta-tubulin was detected at ~50 kDa in all tested cell lines.



Western Blotting

Image 2. Western blotting analysis of porcine brain lysate using anti-beta tubulin (TU-13) purified.