

Product datasheet for **BM753S**

Tubulin (TUBA1B) (Loading Control) Mouse Monoclonal Antibody [Clone ID: TU-01]

Product data:

Product Type:	Primary Antibodies
Clone Name:	TU-01
Applications:	ELISA, FC, IF, IHC, IP, WB
Recommended Dilution:	Western Blotting (Reducing conditions): <i>Recommended Dilutions:</i> 1-2 µg/ml. <i>Incubation Time:</i> 60 min at RT. <i>Positive Control:</i> HPB-ALL peripheral blood leukemia cell lysate (incubation 60 min). Porcine brain lysate (incubation 90 min). <i>Sample Preparation:</i> Resuspend approx. 50 mil. cells in 1 ml cold Lysis buffer (1% laurylmaltoside in 20 mM Tris/Cl, 100 mM NaCl pH 8.2, 50 mM NaF including Protease inhibitor Cocktail). Incubate 60 min on ice. Centrifuge to remove cell debris. Mix lysate with reducing Laemmli SDS-PAGE sample buffer. Flow cytometry: Recommended dilution: 1-4 µg/ml, intracellular staining. Immunocytochemistry: <i>Recommended Dilutions:</i> DY547 conjugate: 2-3 µg/ml, FITC conjugate: 3 µg/ml. <i>Staining Technique:</i> fixed and permeabilized cells. Immunohistochemistry on Paraffin Sections: <i>Recommended Dilutions:</i> 5 µg/ml. <i>Positive Control:</i> Heart. Clone TU-01 has also been described to work in ELISA and Immunoprecipitation .
Reactivity:	All Species
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Fraction of Tubulin purified from Pig brain by two cycles of polymerization-depolymerization
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).

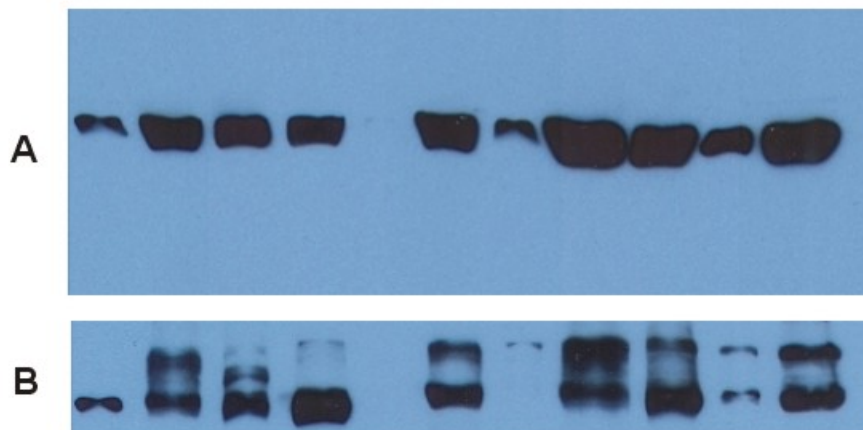


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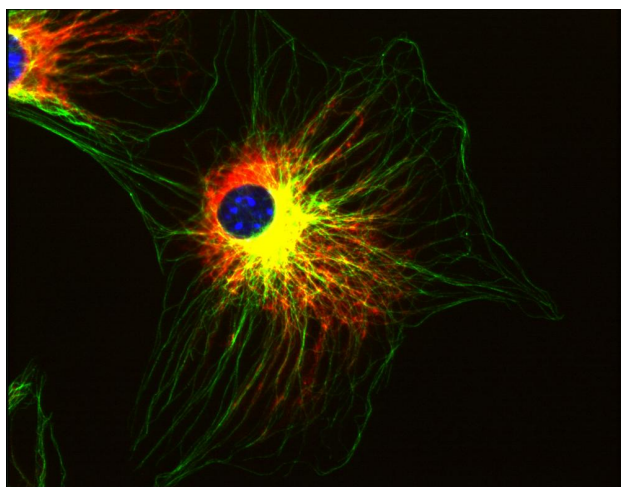
Formulation:	PBS, pH~7.4 State: Purified State: Liquid purified IgG fraction (>95% pure by SDS-PAGE) Preservative: 15 mM Sodium Azide
Concentration:	lot specific
Purification:	Precipitation Methods
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C. DO NOT FREEZE!
Stability:	Shelf life: one year from despatch.
Gene Name:	tubulin alpha 1b
Database Link:	Entrez Gene 10376 Human P68363
Background:	<p>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 (guanosinotriphosphate) 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.</p> <p>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.</p>

Synonyms:	Tubulin alpha-1B chain, Tubulin alpha-ubiquitous chain, Alpha-tubulin ubiquitous, Tubulin K-alpha-1
Protein Families:	Druggable Genome
Protein Pathways:	Gap junction, Pathogenic Escherichia coli infection

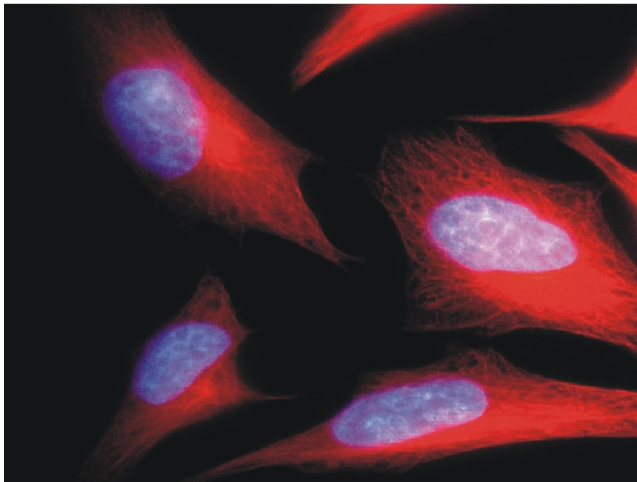
Product images:



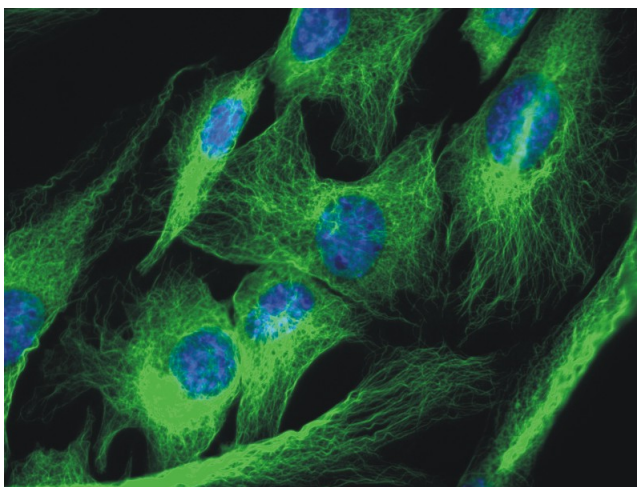
Use of anti-alpha-tubulin antibody TU-01 as a loading control (A) in a Western blotting experiment revealing the staining pattern of various cell lysates by a newly developed monoclonal antibody (B).



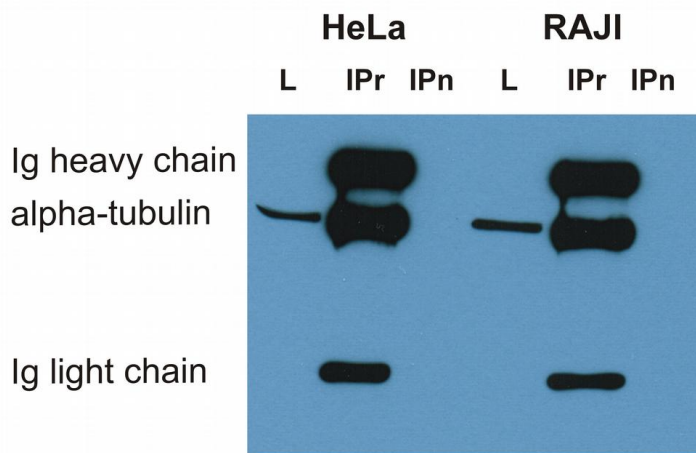
Immunofluorescence staining of 3T3 mouse embryonal fibroblast cell line using anti-alpha-tubulin (TU-01; green) and anti-Vimentin (VI-01 red). Nucleus is stained with DAPI (blue).



Immunofluorescence staining of HeLa human cervix carcinoma cell line using anti-alpha-tubulin (TU-01; red). Nucleus is stained with DAPI (blue).



Immunofluorescence staining of 3T3 mouse embryonal fibroblast cell line using anti-alpha-tubulin (TU-01; green). Nucleus is stained with DAPI (blue).



Immunoprecipitation of alpha-tubulin from HeLa and RAJI cell lysate by antibody TU-16 and its detection by antibody TU-01. IgM heavy chain (76-92 kDa) and IgM light chain (25-30 kDa) indicated. Mr of alpha tubulin is around 50 kDa. L = lysate IPr = immunoprecipitate (reducing conditions) IPn = immunoprecipitate (non-reducing conditions)