abcam

ab74696

Biotin Anti-alpha Tubulin antibody [TU-01] - Loading Control

Anti-alpha Tubulin antibody [TU-01] conjugated to Biotin - suitable for flow cytometry, IHC-P, Western blot, and reacts with human samples. Clone [TU-01] is a mouse monoclonal antibody.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	Biotin
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Clone number	TU-01
Purification technique	Size-exclusion chromatography
Specificity	ab74696 recognizes the defined epitope (aa 65-97) on the N-terminal structural domain of alpha-tubulin. This epitope is conserved within all species.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1-2 g/mL

Notes	reducing conditions.

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information TUBA4A

Function	Tubulin is the major constituent of microtubules, a cylinder consisting of laterally associated linear protofilaments composed of alpha- and beta-tubulin heterodimers. Microtubules grow by the addition of GTP-tubulin dimers to the microtubule end, where a stabilizing cap forms. Below the cap, tubulin dimers are in GDP-bound state, owing to GTPase activity of alpha-tubulin.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

The purified antibody is conjugated with Biotin-LC-NHS under optimum conditions. The reagent is free of unconjugated biotin.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Alpha tubulin also known as DM1A is an important component of the structural unit called microtubules. This protein weighs approximately 50 kDa and acts as a building block in the cytoskeleton. Alpha tubulin is expressed in various cell types across many organisms playing a fundamental role in maintaining cell shape and enabling intracellular transport. Researchers often acetylate alpha tubulin to study post-translational modifications and its effects on microtubule dynamics.
Biological function summary	Alpha tubulin combines with beta tubulin to form the tubulin dimer which is the basic unit of microtubule polymerization. These dimers assemble into microtubule filaments integral in numerous cellular processes. As part of the cytoskeleton network alpha tubulin facilitates roles in mitosis and meiosis providing spindle structures necessary for chromosome separation. Its participation in cell signaling pathways is noteworthy as it interacts with motor proteins like kinesins and dyneins to aid cellular activities.
Pathways	Alpha tubulin holds critical roles in microtubule-associated processes within the cytoskeleton and intracellular transport pathways. It interacts with the MAP (microtubule-associated protein) family which modulates microtubule stability and impacts cell division and trafficking. Moreover the microtubule pathway involves proteins like tau which bind to stabilize microtubules and are implicated in cellular dynamics and signaling.
Associated diseases and disorders	Alpha tubulin is relevant in neurodegenerative diseases such as Alzheimer's disease and cancer. Aberrant modifications or mutations in alpha tubulin or associated proteins like tau can disrupt microtubule stability contributing to pathological conditions. In cancer altered expression of alpha tubulin affects cell division leading to tumor progression and chemoresistance. Researchers study alpha tubulin using techniques such as immunofluorescence with Alexa fluor 555 to understand its role in disease better.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

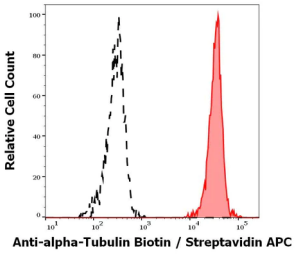
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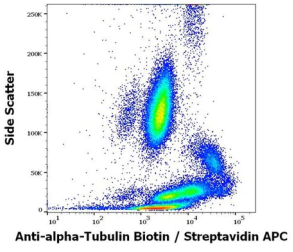
2 product images



Flow Cytometry - Biotin Anti-alpha Tubulin antibody [TU-01] - Loading Control (ab74696)

Alpha Tubulin Flow Cytometry staining using mouse Anti-alpha Tubulin antibody

Separation of human monocytes stained using anti-alpha-tubulin (TU-01) Biotin antibody (concentration in sample 8 µg/ml, Streptavidin APC, red-filled) from monocytes stained using mouse IgG1 isotype control (MOPC-21) Biotin antibody (concentration in sample 8 µg/ml, same as alpha-tubulin Biotin, Streptavidin APC, black-dashed) in flow cytometry analysis (intracellular staining).



Flow Cytometry - Biotin Anti-alpha Tubulin antibody [TU-01] - Loading Control (ab74696)

Alpha Tubulin Flow Cytometry staining of human peripheral whole blood using mouse Anti-alpha Tubulin antibody

Flow cytometry intracellular staining pattern of human peripheral whole blood stained using anti-alpha-tubulin (TU-01) Biotin antibody (concentration in sample 8 µg/ml, Streptavidin APC).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.