abcam

ab204947

Anti-beta I Tubulin antibody [2A1A9]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human TUBB1 aa 1-200. The exact immunogen used to generate this antibody is proprietary information. Database link Q9H4B7
Clone number	2A1A9
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/200 - 1/400
Notes	-

Expected

Species	Mouse, Rat, African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

Species	Mouse
Dilution info	1/500 - 1/2000
Notes	-

Species	Rat
Dilution info	1/500 - 1/2000
Notes	-

Species	African green monkey
Dilution info	1/500 - 1/2000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

Expected

Species	Mouse, Rat, African green monkey

Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

Expected

Species	Mouse, Rat, African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information TUBB1

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 duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot

Storage information	Avoid freeze / thaw cycle

Supplementary info

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

Activity summary	Beta I Tubulin also known as TUBB1 is an essential component of the microtubule cytoskeleton specifically expressed in hematopoietic cells such as platelets. It is a protein with a mass of approximately 50 kDa. This protein shares structural similarities with other beta tubulins forming heterodimers with alpha-tubulin to construct the microtubules necessary for cell shape and movement. Beta I Tubulin primarily localizes to regions where it aids in the dynamics of microtubule assembly and stabilization.
Biological function summary	Beta tubulins are important for proper cell division signal transduction and organelle positioning. Beta I Tubulin integrates into the microtubule complex playing an important role in platelet formation and function. The dynamic behavior of microtubules facilitated by beta I Tubulin and its interactions influences cytoskeletal organization enabling cells to maintain their architecture and transport intracellular components effectively.
Pathways	Beta I Tubulin becomes critical in signaling pathways that involve cytoskeleton dynamics such as the Rho GTPase signaling pathway which is essential for actin and microtubule dynamics. It works together with proteins like alpha-tubulin and actin to ensure the proper development of megakaryocytes precursors to platelets. The function of these pathways determines efficient platelet production and stabilization closely linked to overall cellular homeostasis and response to external stimuli.
Associated diseases and disorders	Beta I Tubulin has connections to conditions such as congenital macrothrombocytopenia and other platelet disorders. Mutations or dysregulations of beta I Tubulin can lead to abnormal platelet morphology and function impacting hemostasis. This protein also shows connections to alpha-tubulin in these disorders indicating the essential partnership between tubulin subunits in the formation of functional microtubules and emphasizing their significance in maintaining normal physiological states.

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.

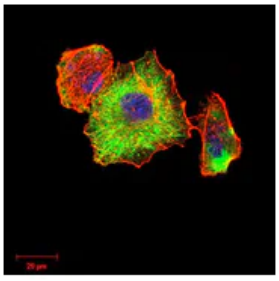
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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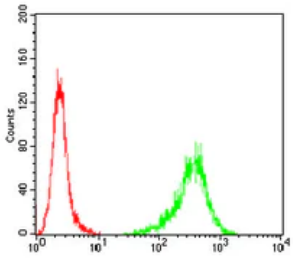
7 product images



Immunocytochemistry/ Immunofluorescence - Anti-beta I Tubulin antibody [2A1A9] (ab204947)

Beta I Tubulin Immunocytochemistry/ Immunofluorescence staining using mouse Anti-beta I Tubulin antibody

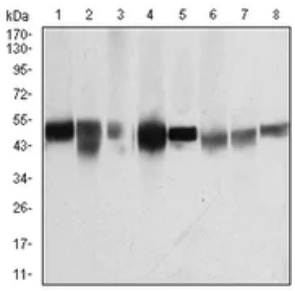
Immunofluorescent staining of Hela cells labeling beta I Tubulin with ab204947 at 1/200 (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin.



Flow Cytometry - Anti-beta I Tubulin antibody [2A1A9] (ab204947)

Beta I Tubulin Flow Cytometry staining using mouse Anti-beta I Tubulin antibody

Flow cytometric analysis of A431 cells labeling beta I Tubulin with ab204947 at 1/200 (green) or negative control (red)



Western blot - Anti-beta I Tubulin antibody [2A1A9] (ab204947)

All lanes:
Western blot - Anti-beta I Tubulin antibody [2A1A9] (ab204947) at 1/500 dilution

Lane 1:
K562 cell lysate

Lane 2:
HepG2 cell lysate

Lane 3:
A431 cell lysate

Lane 4:
Jurkat cell lysate

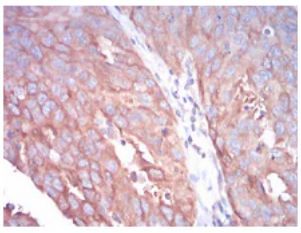
Lane 5:
Hela cell lysate

Lane 6:
NIH-3T3 cell lysate

Lane 7:
Cos7 cell lysate

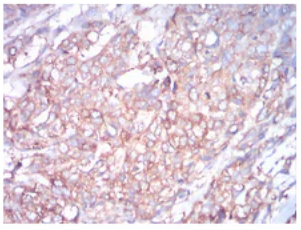
Lane 8:
PC12 cell lysate

Predicted band size: 50 kDa



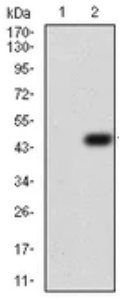
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta I Tubulin antibody [2A1A9] (ab204947)

Immunohistochemical analysis of formalin fixed paraffin embedded ovarian cancer tissue labeling beta I Tubulin using ab204947 at 1/200 dilution followed by DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta I Tubulin antibody [2A1A9] (ab204947)

Immunohistochemical analysis of formalin fixed paraffin embedded ovarian cancer tissue labeling beta I Tubulin using ab204947 at 1/200 dilution followed by DAB staining.



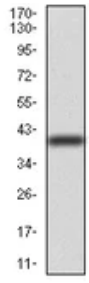
Western blot - Anti-beta I Tubulin antibody [2A1A9] (ab204947)

All lanes:
Western blot - Anti-beta I Tubulin antibody [2A1A9] (ab204947) at 1/500 dilution

Lane 1:
HEK293 cell lysate

Lane 2:
human beta 1 Tubulin (AA: 33-166) -hIgGFc transfected HEK293 cell lysate

Predicted band size: 50 kDa



Western blot - Anti-beta I Tubulin antibody [2A1A9] (ab204947)

All lanes:
Western blot - Anti-beta I Tubulin antibody [2A1A9] (ab204947) at 1/500 dilution

All lanes:
human beta 1 Tubulin (AA: 33-166) recombinant protein

Predicted band size: 50 kDa

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