For Research Use Only

acetylated Tubulin(Lys40) Monoclonal antibody

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Catalog Number:66200-1-Ig 78 Publications

Basic Information

Catalog Number:
66200-1-Ig

Size:
150ul , Concentration: 1400 μg/ml by Nanodrop and 700 μg/ml by Bradford method using BSA as the standard;

Source:
Mouse

Isotype:
IgG1

GenBank Accession Number:
NM_006009

GeneID (NCBI):
7846

UNIPROT ID:
Q71U36

Full Name:
tubulin, alpha 1a

Calculated MW:
52 kDa

Observed MW:
50-55 kDa

Purification Method:
Protein G purification

CloneNo.:
7E5H8

Recommended Dilutions:
WB 1:2000-1:10000
IHC 1:1000-1:4000
IF 1:50-1:500

Applications

Tested Applications:
WB, IF, IHC, ELISA

Cited Applications:
WB, IF, IHC

Species Specificity:
human, mouse, rat, Canine, pig

Cited Species:
human, rat, mouse, zebrafish, pig, Drosophila, canine, bovine

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : rat testis tissue, NCCIT cells, Neuro-2a cells, L02 cells, pig cerebellum tissue, rat brain tissue, mouse ovary tissue, HEK-293 cells, mouse testis

IHC : mouse ovary tissue, human gliomas tissue, rat brain tissue, mouse brain tissue, human lung cancer tissue

IF : MDCK cells, mouse brain tissue, islet

Background Information

Tubulin, composed of heterodimers of alpha and beta tubulin, is the mainly component of microtubules which play important roles in cell motility, mitosis, and intracellular vesicle transport. Both alpha and beta tubulin undergo several posttranslational modifications such as polyglutamylation and acetylation/deacetylation. Tubulin acetylation occurs on lysine-40 at the N-terminal of alpha tubulin and is conserved across species. The histone deacetylase HDAC6 and SIRT2 has been identified as tubulin deacetylases. Reversible acetylation of alpha tubulin may be implicated in regulating microtubule stability, cell motility, and axon regeneration. The level of acetylated tubulin has been linked to epithelial malignancies and sensitivity to chemotherapy. In addition, acetylated tubulin has been widely used as a marker for primary cilia. This antibody is specific to the acetylated tubulin; it does not recognize non-acetylated tubulin. (24268707, 23881549)

Notable Publications

Author	Pubmed ID	Journal	Application
Yan Yan	28966044	Dev Cell	WB
Jung Hoon Cho	36149960	Sci Adv	IHC
Zipeng A. Li	36213262	Front Endocrinol (Lausanne)	IF

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

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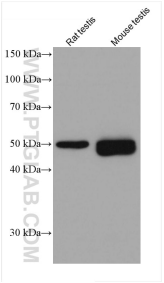
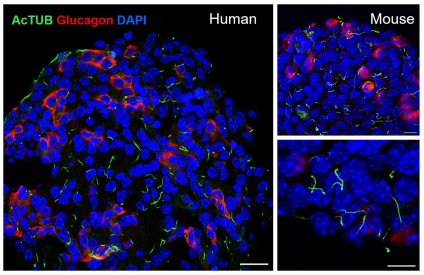
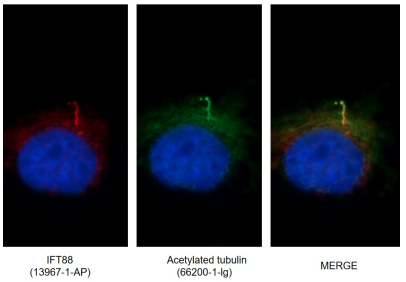
Selected Validation Data



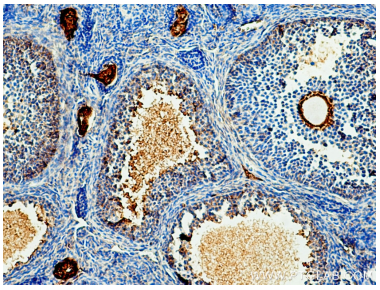
Various lysates were subjected to SDS PAGE followed by western blot with 66200-1-Ig (acetylated Tubulin(Lys40) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



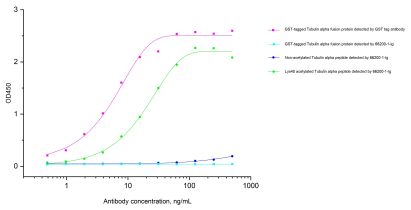
(left) Confocal image of a single-plane cross-section of a healthy human islet, showing primary cilia on both alpha cells (glucagon, red) and non-alpha cells (non-red). Acetylated alpha tubulin, cilia (green, Cat. No 66200-1-Ig, 1:400), nuclei (blue), scale 20 µm. (right) Primary cilia in wildtype B6 mouse islets: acetylated alpha tubulin (green, Cat. No 66200-1-Ig, 1:400), glucagon (red), nuclei (blue), single-plane images, scales 10 µm. (Fig from Dr. Jing Hughes)



Immunofluorescent images of MDCK cells stained for IFT88 rabbit pAb (13967-1-AP) and acetylated tubulin mouse mAb (66200-1-Ig) at dilution of 1:50, further stained with Alexa Fluor 594-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) for 13967-1-AP, and Alexa Fluor 488-conjugated AffiniPure Goat anti-Mouse IgG (H+L) for 66200-1-Ig.



Immunohistochemical analysis of paraffin-embedded mouse ovary tissue slide using 66200-1-Ig (acetylated Tubulin(Lys40) antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Specificity validation by indirect ELISA. Indirect ELISA was carried out by coating E.coli expressed GST-tagged Tubulin alpha (70 ng/well), non-acetylated Tubulin alpha, and Lys40 acetylated Tubulin alpha (with excessive amount) followed by blocking and adding serial diluted GST tag primary antibody (Cat.NO. 66001-2-Ig) and Acetylated Tubulin antibody 66200-1-Ig respectively. HRP-Goat anti-mouse secondary antibody was used for detection. Signal was developed with