

Product datasheet

HRP Anti-beta Tubulin antibody [BT7R] ab173840

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Overview

Product name	HRP Anti-beta Tubulin antibody [BT7R]
Description	HRP Mouse monoclonal [BT7R] to beta Tubulin
Host species	Mouse
Conjugation	HRP
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Mouse, Rat, Dog, Human, Non human primates, African green monkey
Immunogen	Synthetic peptide corresponding to Human beta Tubulin (N terminal) conjugated to Keyhole Limpet Haemocyanin (KLH). Database link: P07437
Positive control	WB: A431, U2OS, 293T, Jurkat, HeLa, COS-7, C2C12, NRK, A549, MDCK, MDA-MB-231, PC-12 and RSC96 cell lysates. Mouse lung tissue extracts.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	Constituents: 0.07% Kathon, 99.93% PBS
Clonality	Monoclonal
Clone number	BT7R
Isotype	IgG2a

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab173840 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/2000. Predicted molecular weight: 50 kDa.

Target

Function

Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha chain.

Tissue specificity

Ubiquitously expressed with highest levels in spleen, thymus and immature brain.

Involvement in disease

Cortical dysplasia, complex, with other brain malformations 6
Skin creases, congenital symmetric circumferential, 1

Sequence similarities

Belongs to the tubulin family.

Domain

The highly acidic C-terminal region may bind cations such as calcium.

Post-translational modifications

Some glutamate residues at the C-terminus are polyglutamylated, resulting in polyglutamate chains on the gamma-carboxyl group (PubMed:26875866). Polyglutamylation plays a key role in microtubule severing by spastin (SPAST). SPAST preferentially recognizes and acts on microtubules decorated with short polyglutamate tails: severing activity by SPAST increases as the number of glutamates per tubulin rises from one to eight, but decreases beyond this glutamylation threshold (PubMed:26875866).

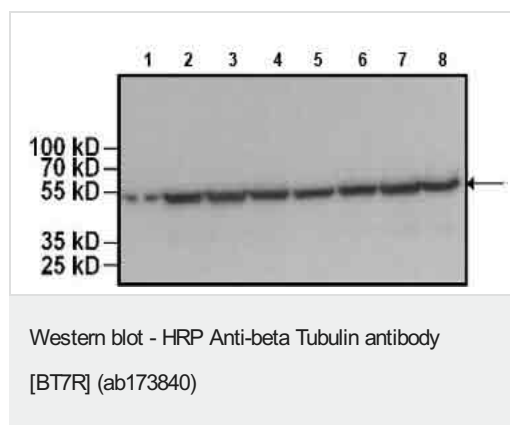
Some glutamate residues at the C-terminus are monoglycylated but not polyglycylated due to the absence of functional TLL10 in human. Monoglycylation is mainly limited to tubulin incorporated into axonemes (cilia and flagella). Both polyglutamylation and monoglycylation can coexist on the same protein on adjacent residues, and lowering glycylation levels increases polyglutamylation, and reciprocally. The precise function of monoglycylation is still unclear.

Phosphorylated on Ser-172 by CDK1 during the cell cycle, from metaphase to telophase, but not in interphase. This phosphorylation inhibits tubulin incorporation into microtubules.

Cellular localization

Cytoplasm, cytoskeleton.

Images



All lanes : HRP Anti-beta Tubulin antibody [BT7R] (ab173840) at 1/1000 dilution

Lane 1 : A431 cell lysate

Lane 2 : U2OS cell lysate

Lane 3 : 293T cell lysate

Lane 4 : Jurkat cell lysate

Lane 5 : HeLa cell lysate

Lane 6 : COS7 cell lysate

Lane 7 : C2C12 cell lysate

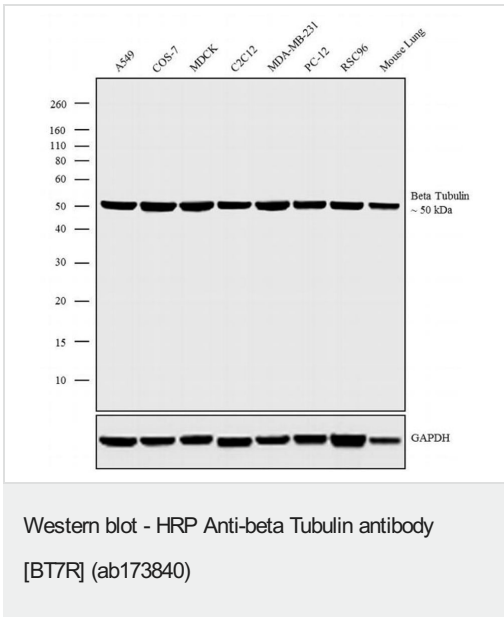
Lane 8 : NRK cell lysate

Lysates/proteins at 50 µg per lane.

Developed using the ECL technique.

Predicted band size: 50 kDa

4-20% Tris-HCl polyacrylamide gel.



All lanes : HRP Anti-beta Tubulin antibody [BT7R] (ab173840) at 1 µg/ml

Lane 1 : A549 (Human adenocarcinomic alveolar basal epithelial cells)

Lane 2 : COS-7 (African green monkey kidney fibroblast cells)

Lane 3 : MDCK (Madin-Darby Canine Kidney cells)

Lane 4 : C2C12 (Mouse myoblast cells)

Lane 5 : MDA-MB-231 (Human breast cancer cells)

Lane 6 : PC-12 (Embryonic Rat adrenal medulla cells)

Lane 7 : RSC96

Lane 8 : Mouse lung tissue

Lysates/proteins at 30 µg per lane.

Predicted band size: 50 kDa

Observed band size: 50 kDa

Blocking buffer: 5% milk.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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