


Product datasheet

HRP Anti-beta Tubulin antibody - Loading Control ab21058

★★★★★ [4 Abreviews](#) [103 References](#) [3 Images](#)

Overview

Product name	HRP Anti-beta Tubulin antibody - Loading Control
Description	HRP Rabbit polyclonal to beta Tubulin - Loading Control
Host species	Rabbit
Conjugation	HRP
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Chicken, Cow, Pig, Xenopus laevis, Chimpanzee, Zebrafish 
Immunogen	Synthetic peptide corresponding to Human beta Tubulin aa 1-100 conjugated to keyhole limpet haemocyanin. (Peptide available as ab20775)
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 short term (1-2 weeks). Store at -20°C. Avoid freeze / thaw cycle. Store In the Dark.
Storage buffer	pH: 7.40 Preservative: 0.1% Proclin 300 Solution Constituents: PBS, 1% BSA, 30% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab21058 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	★★★★★ (4)	1/1000. Detects a band of approximately 50 kDa (predicted molecular weight: 50 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

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).

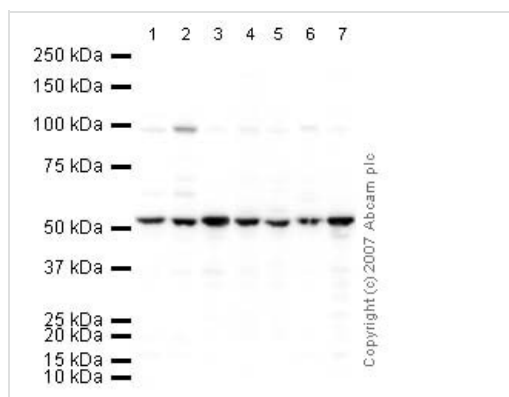
Some glutamate residues at the C-terminus are monoglycylated but not polyglycylated due to the absence of functional TTL10 in human. Monoglycylation is mainly limited to tubulin incorporated into axonemes (cilia and flagella). Both polyglutamylation and monoglycylation can coexist on the same protein 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



Western blot - HRP Anti-beta Tubulin antibody - Loading Control (ab21058)

All lanes : HRP Anti-beta Tubulin antibody - Loading Control (ab21058) at 1 µg/ml

Lane 1 : NIH/3T3 whole cell lysate ([ab7179](#))

Lane 2 : MEF1 (Mouse embryonic fibroblast cell line) Whole Cell Lysate

Lane 3 : Brain (Mouse) Tissue Lysate

Lane 4 : Spinal Cord (Mouse) Tissue Lysate

Lane 5 : Ovary (Mouse) Tissue Lysate - normal tissue

Lane 6 : PC12 (Rat adrenal pheochromocytoma cell line) Whole Cell Lysate

Lane 7 : Brain (Rat) Tissue Lysate - normal tissue

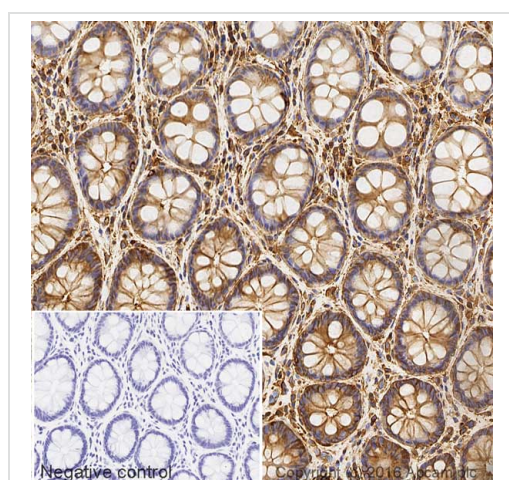
Lysates/proteins at 10 µg per lane.

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 50 kDa

Observed band size: 51 kDa

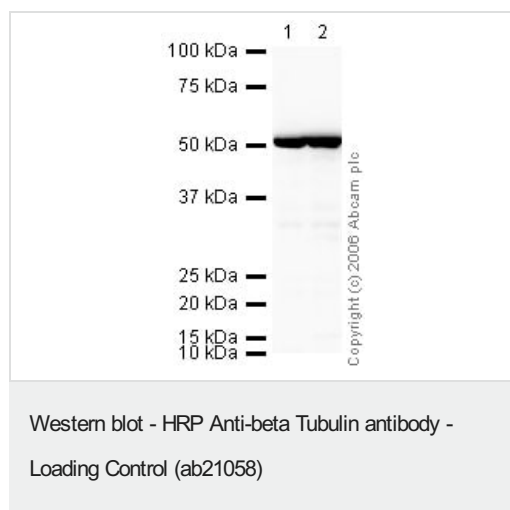


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - HRP Anti-beta Tubulin antibody - Loading Control (ab21058)

IHC image of beta Tubulin staining in a section of formalin-fixed paraffin-embedded normal human colon tissue performed on a Leica BOND™. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab21058, 1/100 dilution, for 15 mins at room temperature. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset negative control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

**Tissue obtained from the Human Research Tissue Bank,*



All lanes : HRP Anti-beta Tubulin antibody - Loading Control (ab21058) at 1/1000 dilution

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2 : A-431 whole cell lysate (**ab7909**)

Lysates/proteins at 20 µg per lane.

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 50 kDa

Observed band size: 50 kDa

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

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