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Product no AS10 681

Tubulin beta chain

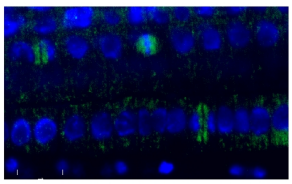
Product information

Immunogen	KLH-conjugated peptide derived from available tubulin beta chain sequences (located at a surface loop) including all *Arabidopsis thaliana* tubulin beta-2/beta-3 chain P29512, beta-4 chain P24636(At5g44340), beta-5 chain P29513(At1g20010), beta-6 chain P29514(At5g12250), beta-7 chain P29515(At2g29550), beta-8 chain P29516(At5g23860), beta-9 chain P29517(At4g20890).
Host	Rabbit
Clonality	Polyclonal
Purity	Immunogen affinity purified serum in PBS pH 7.4.
Format	Lyophilized
Quantity	100 µg
Reconstitution	For reconstitution add 100 µl of sterile water
Storage	Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please remember to spin the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.
Additional information	Please, note that tubulin beta is only detected in actively dividing meristematic cells (see immunolocalization image below). Therefore to allow detection on a western blot, analyzed material must contain enough meristematic cells with dividing activity. Signal in a western blot application in *Chlamydomonas reinhardtii* is obtained with a load of 100 µg/well and a dilution of 1: 500.

Application information

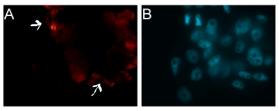
Recommended dilution	1 : 1000 (IF), 1 : 500 (WB)
Expected | apparent MW	49 | 49 kDa (*Arabidopsis thaliana*)
Confirmed reactivity	*Arabidopsis thaliana* (including suspension cells), *Chlamydomonas reinhardii, Medicago sativa*
Predicted reactivity	*Brassica napus, Glycine max, Hordeum vulgare, Micromonoas pusilla, Nicotiana attenuata, Oryza sativa, Ostreococcus lucimarinus, Picea sitcHensis, Pisum sativum, Physcomitrium patens, Populus trichocarpa, Saccharomyces cerevisiae, Solanum tuberosum, Sorghum bicolor, Ricinus communis, Zea mays, Vigna radiata, Vitis vinifera* Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Additional information	Metal induced stress affected the expression of tubulin, and that therefore, this protein cannot be used as a loading control under that type of conditions. More information can be found here.
Selected references	Gong et al. (2024).HYPK controls stability and catalytic activity of the N-terminal acetyltransferase A in Arabidopsis thaliana. Cell Rep. 2024 Feb 15;43(2):113768.doi: 10.1016/j.celrep.2024.113768. Durian et al. (2019). PROTEIN PHOSPHATASE 2A-B' gamma controls Botrytis cinerea resistance and developmental leaf senescence. Plant Physiol. 2019 Oct 28. pii: pp.00893.2019. doi: 10.1104/pp.19.00893. Wang et al. (2017). The inhibition of protein translation mediated by AtGCN1 is essential for cold tolerance in Arabidopsis thaliana. Plant Cell Environ. 2017 Jan;40(1):56-68. doi: 10.1111/pce.12826. Heinnickel et al. (2016). Tetratricopeptide repeat protein protects photosystem I from oxidative disruption during assembly. Proc Natl Acad Sci U S A. 2016 Mar 8;113(10):2774-9. doi: 10.1073/pnas.1524040113

Application example



Tubulin beta localization in *Arabidopsis thaliana* epidermis cells. Tubulin beta localized to division plates visualized in green, nucleus with DAPI in blue. Plant material has been fixed in para-formaldehyde for 30 minutes. Tissue cleaning has been performed before immunolocalization. Primary

antibodies: Agrisera anti-tubulin beta priamry antibody in dilution 1: 1000 and Agrisera goat anti-rabbit IgG DyLight® 488, secondary antibody in dilution 1: 2000. Scale bar – 10 µm.



(A) The 3 days old suspension cells of *Arabidopsis thaliana* have been fixed for 25 minutes with 2% FA, cell wall was partaillly digested with 0.2% Dricelase in MES buffer (pH 5.1) for 30 min at 37°C and the cells were dried on coated slide to omit PM extraction. Following by incubation for 45 minutes with Agrisera anti-tubulin beta chain primary antibody in a dilution of 1: 1000, washing once and 45 min incubation with a secondary goat anti-rabbit Alexa 555 antibody, in a dilution of 1:1000 dilution (Invitrogen). Cells were counterstained witn DAPI and visialized under epi/fluiresecnet microscope **(B)**.

Courtesy Dr. Taras Pasternak, Freiburg University, Germany