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Product no AS01 004

Lhcb1 | LHCII type I chlorophyll a/b-binding protein

Product information

Immunogen	BSA-conjugated, 11 amino acidslong synthetic peptide derived from a highly conserved sequence of Lhb1 proteins from angiosperms (monocots and dicots) and gymnosperms, including *Arabidopsis thaliana* Lhcb1.1 UniProt: P0CJ48-1, TAIR: AT1G29920, Lhcb1.2 UniProt: Q8VZ87-1, TAIR: AT1G29910, Lhcb1.3 (most expressed) UniProt: P04778-1, TAIR: AT1G2993, Lhcb1.4 UniProt: Q39142-1 , TAIR: AT2G34430, Lhcb1.5 UniProt: Q39141-1, TAIR: At2g34420
Host	Rabbit
Clonality	Polyclonal
Purity	Immunogen affinity purified serum in PBS pH 7.4.
Format	Lyophilized
Quantity	50 µg
Reconstitution	For reconstitution add 50 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.

Application information

Recommended dilution	1 : 2000 (WB)
Expected | apparent MW	28 | 25 kDa for *Arabidopsis thaliana*
Confirmed reactivity	*Arabidopsis thaliana, Arachis hypogaea, Brassica napus, Citrus retuculata, Chlorella vulgaris, Colobanthus quitensis Kunt Bartl, Craterostigma pumilum, Hordeum vulgare, Lycopersicon esculentum (Solanum lycopersicon), Mesembryanthemum crystallinum, Nicotiana tabacum, Oryza sativa, Pisum sativum, Phaseolus vulgaris, Rhoeo discolor, Silene vulgaris, Sinapsis alba, Solanum lycopersicum, Spinacia oleracea, Tillandsia flabellate, Triticum aestivum, Triticale, Zea mays*
Predicted reactivity	*Aegilops tauschii, Catalpa bungei, Cucumis sativus, Brachypodium distachyon, Lotus japonicus, Hordeum vulgare, Musa acuminata, Physcomitrium patens, Solanum tuberosum, Zosteria marina, Vitis vinifera* Species of your interest not listed? Contact us
Not reactive in	*Picea abies*
Additional information	Lhcb1 Protein is processed into mature form (Jansson 1999). This product can be sold containing ProClin if requested
Selected references	Harchouni et al. (2022) Guanosine tetraphosphate (ppGpp) accumulation inhibits chloroplast gene expression and promotes super grana formation in the moss Physcomitrium (Physcomitrella) patens. New Phytol. 2022;236(1):86-98. doi:10.1111/nph.18320 Gao Y et al. (2022) Chloroplast translational regulation uncovers nonessential photosynthesis genes as key players in plant cold acclimation. Plant Cell. 2022 Apr 26;34(5):2056-2079. doi: 10.1093/plcell/koac056. PMID: 35171295; PMCID: PMC9048916. Ivanov et al. (2022) The decreased PG content of pgp1 inhibits PSI photochemistry and limits reaction center and light-harvesting polypeptide accumulation in response to cold acclimation. Planta 255, 36 (2022). https://doi.org/10.1007/s00425-022-03819-0 Medina-Puche et al (2021). Protocol for evaluating protein relocalization from the plasma membrane to chloroplasts. STAR Protoc. 2021 Sep 14;2(4):100816. doi: 10.1016/j.xpro.2021.100816. PMID: 34585156; PMCID: PMC8450296. Chen, Liu & Liu (2021) Loss-Function of EGY1 Results in Photosynthesis Damage through Reducing Stability of Photosystem II in Arabidopsis thaliana. Russ J Plant Physiol (2021). https://doi.org/10.1134/S1021443721060029

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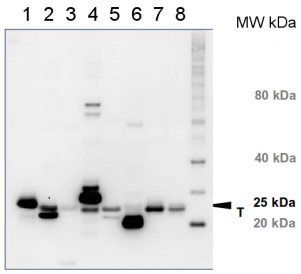

10 µg of total protein from **(1)** *Arabidopsis thaliana* leaf, **(2)** *Hordeum vulgare* leaf, **(3)** *Zea mays* leaf, **(4)** *Chlamydomonas reinhardtii* total cell, **(5)** *Spinacia oleracea* total leaf, **(6)** *Physcomitrella patens*, **(7)** *Solanum tuberosum* total leaf, **(8)** *Solanum esculentum* total leaf, all extracted with **P**rotein **E**xtraction **B**uffer PEB (AS08 300) were separated on 4-12% NuPage (Invitrogen) LDS-PAGE and blotted 1h to PVDF. Blots were blocked immediately following transfer in 2-2.5 % blocking reagent in 20 mM Tris, 137 mM sodium chloride pH 7.6 with 0.1% (v/v) Tween-20 (TBS-T) for 1h at room temperature with agitation. Blots were incubated in the primary antibody at a dilution of 1: 10 000 for 1h at room temperature with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in TBS-T at room temperature with agitation. Blots were incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, recommended secondary antibody AS09 602) diluted to 1:25 000 in TBS-T for 1h at room temperature with agitation. The blots were washed as above and developed for 5 min with chemiluminescent detection reagent according the manufacturers instructions. Images of the blots were obtained using a CCD imager (FluorSMax, Bio-Rad) and Quantity One software (Bio-Rad). Exposure time was 2 minutes.