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Product no AS09 522

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

Product information

Immunogen	BSA-conjugated synthetic peptide derived from *Arabidopsis thaliana* At1g29910 (Lhcb1.1), At1g29920 (Lhcb1.2), At1g29930 (Lhcb1.3, most expressed), At2g34430 (Lhcb1.4), and At2g34420 (Lhcb1.5)
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.
Additional information	A molecular characterisation of the LHCII proteins can be found in Caffarri et al. (2004) A Look within LHCII: Differential Analysis of the Lhcb1–3 Complexes Building the Major Trimeric Antenna Complex of Higher-Plant Photosynthesis. Biochemistry 43 (29): 9467–9476

Application information

Recommended dilution	1 : 2500-1 : 5000 (WB)
Expected | apparent MW	28 | 25 kDa (*Arabidopsis thaliana)*
Confirmed reactivity	*Arabidopsis thaliana, Digitaria sanguinalis, Echinochloa crus-galli, Pinus strobus L., Solanum lycopersicum*
Predicted reactivity	*Brassica napus, Camelina sativa*, *Raphanus sativus*, *Zea mays* Species of your interest not listed? Contact us
Not reactive in	*Oryza sativa* request this antibody: AS24 5034
Additional information	This Lhcb1 antibody is directed specifically against the *Arabidopsis* Lhcb1 gene products, for those that would prefer higher specific activity over broader specificity offered by Agrisera older Lhcb1 antibody, AS01 004 Protein is processed into mature form (Jansson 1999).
Selected references	Collombat et al. (2025). Arabidopsis conditional photosynthesis mutants abc1k1 and var2 accumulate partially processed thylakoid preproteins and are defective in chloroplast biogenesis. Commun Biol . 2025 Jan 22;8(1):111. doi: 10.1038/s42003-025-07497-y. Sakurabata et al. (2024). HASTY-mediated miRNA dynamics modulate nitrogen starvation-induced leaf senescence in Arabidopsis. Nat Commun. 2024 Sep 10;15(1):7913. doi: 10.1038/s41467-024-52339-w. Bru, Steen, Park, et al. (2022) The major trimeric antenna complexes serve as a site for qH-energy dissipation in plants. J Biol Chem. 2022;298(11):102519. doi:10.1016/j.jbc.2022.102520 Wang et al. (2020). Post-translational coordination of chlorophyll biosynthesis and breakdown by BCMs maintains chlorophyll homeostasis during leaf development. Nat Commun. 2020; 11: 1254. Pralon et al. (2019). Plastoquinone homoeostasis by Arabidopsis proton gradient regulation 6 is essential for photosynthetic efficiency. Commun Biol. 2019 Jun 20;2:220. doi: 10.1038/s42003-019-0477-4. Lal et al. (2018). The Receptor-like Cytoplasmic Kinase BIK1 Localizes to the Nucleus and Regulates Defense Hormone Expression during Plant Innate Immunity. Cell Host Microbe. 2018 Apr 11;23(4):485-497.e5. doi: 10.1016/j.chom.2018.03.010. Tamburino et al. (2017). Chloroplast proteome response to drought stress and recovery in tomato (Solanum lycopersicum L.). BMC Plant Biol. 2017 Feb 10;17(1):40. doi: 10.1186/s12870-017-0971-0. Fristedt et al. (2017). PSB33 sustains photosystem II D1 protein under fluctuating light conditions. Journal of Experimental Botany doi:10.1093/jxb/erx218. Hartings et al. (2017). The DnaJ-Like Zinc-Finger Protein HCF222 Is Required for Thylakoid Membrane Biogenesis in Plants. Plant Physiol. 2017 Jul;174(3):1807-1824. doi: 10.1104/pp.17.00401.

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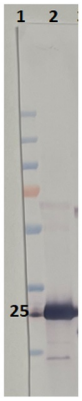

1 - MW marker
2 - 10 ug of *Arabidopsis thaliana* whole leaf extract

10 µg/well of total protein extracted from Arabidopsis thaliana total cell extract, stored at -80C, was denatured with Invitrogen LDS sample buffer (4X) at 70°C/5 min. Samples were separated on Invitrogen NuPage Bis-Tris 4-12% SDS-PAGE and blotted for 1 h to Invitrogen PVDF (pore size of 0.45 um), using: wet transfer. Blot was blocked with 5% milk in TBS-T for: 1h/RT with agitation. Blot was incubated in the primary antibody at a dilution of 1: 1 2000 for 1h/RT with TBS-T Blocking. 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 RT with agitation. Blot was incubated in matching secondary antibody (anti-rabbit IgG ALP conjugated, AS09 607 lot 2401) diluted to 1: 1 000 in TBS-T Blocking for 0,5h/RT with agitation. The blot was washed as above and developed with AS19 BCIP-NBT-PLUS lot 03088241 for 1min. As soon as the desired band is detectable, wash the membrane in generous amounts of deionized water. Place the membrane on Whatman paper to dry. Image was captured after 2,5h.

Courtesy of Agrisera