

Product no **AS01 003****Anti-Lhcb2 | LHCII type II chlorophyll a/b-binding protein****Product information**

Immunogen	BSA-conjugated synthetic peptide derived from a highly conserved sequence of Lhcb2 proteins from angiosperms (monocots and dicots) and gymnosperms, including <i>Arabidopsis thaliana</i> Lhcb2.1 UniProt: Q9SHRZ , TAIR: AT2G05100 , Lhcb2.2 UniProt: Q9S7JZ , TAIR: AT2G05070 , Lhcb2.3 UniProt: Q9XF8Z , TAIR: AT3G27690
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	5 µl of antibody solution (IP), 1: 100 (IG), 1: 500 - 1: 5000 (WB)
Expected apparent MW	28.6 25 kDa for <i>Arabidopsis thaliana</i>
Confirmed reactivity	<i>Acer pseudoplatanus</i> , <i>Arabidopsis thaliana</i> , <i>Arachis hypogaea</i> , <i>Brachypodium sylvaticum</i> , <i>Camellia sinensis</i> , <i>Cicer arietum</i> , <i>Chlorella vulgaris</i> , <i>Colobanthus quitensis</i> Kunt Bartl, <i>Chlamydomonas reinhardtii</i> , <i>Cucumis sativus</i> , <i>Cytisus cantabricus</i> (Wilk.) Rchb. F., <i>Hieracium pilosella</i> L., <i>Hieracium pilosella</i> L., <i>Hordeum vulgare</i> , <i>Lasallia hispanica</i> , <i>Lycopersicon esculentum</i> (<i>Solanum lycopersicon</i>), <i>Miscanthus x giganteus</i> , <i>Mesembryanthemum crystallinum</i> , <i>Nicotiana benthamiana</i> , <i>Nicotiana tabacum</i> , <i>Oryza sativa</i> , <i>Pisum sativum</i> , <i>Phaseolus coccineus</i> L., <i>Phaseolus vulgaris</i> , <i>Physcomitrium patens</i> , <i>Setaria viridis</i> , <i>Sinapsis alba</i> , <i>Spinacia oleracea</i> , <i>Stevia rebaudiana</i> , <i>Syntrichia muralis</i> (Hedw.) Raab, <i>Triticum aestivum</i> , <i>Triticale</i> , <i>Zea mays</i>
Predicted reactivity	Algae, Dicots, Gymnosperms, Mosses
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Additional information	Immunoprecipitation has been done using Immunoprecipitation kit from Roche, Cat.No. 11 719 386 001. Protein is processed into mature form (Jansson 1999).
Selected references	Karasaki et al. (2026) . Genetic Suppressor Screening Identified an SGR1 Mutation that Suppresses Pleiotropic Defects in <i>Arabidopsis</i> <i>egy1</i> Mutant. <i>J. Plant Biol.</i> doi.org/10.1007/s12374-026-09509-8. Banaś et al. (2025) . GERALT, A Cryptochrome/Photolyase Family Protein, Is Essential for Young Chloroplast Development and Function with Its Importance Decreasing in Older Plants. <i>Plant Cell Physiol.</i> 2025 Dec 18:pcaf134.doi: 10.1093/pcp/pcf134. Mohapatra et al. (2025) . An Improved Method for Isolating Intact Chloroplasts from Different Plant Species. <i>Journal of Plant Growth Regulation</i> , doi.org/10.1007/s00344-025-11911-4. Wójtowicz et al. (2025) . Shrink or expand? Just relax! Bidirectional grana structural dynamics as early light-induced regulator of photosynthesis. <i>New Phytol.</i> 2025 Jun;246(6):2580-2596. doi: 10.1111/nph.70175. McKenzie and Puthiyaveetil (2025) . Protein phosphorylation and oxidative protein modification promote plant photosystem II disassembly for repair. <i>Plant Commun.</i> 2025 Mar 10;6(3):101202. doi: 10.1016/j.xplc.2024.101202. Dziubek et al. (2025) . Dissection of photosynthetic short and long-term acclimation to fluctuating light reveals specific functions within the chloroplast thioredoxin network. <i>J Exp Bot.</i> 2025 Mar 24:eraf121. doi: 10.1093/jxb/eraf121. Ermakova et al. (2024) . Chloroplast NADH dehydrogenase-like complex-mediated cyclic electron flow is the main electron transport route in C4 bundle sheath cells. <i>New Phytol.</i> 2024 Jul 22.doi: 10.1111/nph.19982. Zhao et al. (2024) . Psb28 protein is indispensable for stable accumulation of PSII core complexes in <i>Arabidopsis</i> . <i>Plant J.</i> 2024 May 26. doi: 10.1111/tpj.16844. Ciesielska et al. (2024) . S2P2-the chloroplast-located intramembrane protease and its impact on the stoichiometry and functioning of the photosynthetic apparatus of <i>A. thaliana</i> . <i>Front Plant Sci.</i> 2024 Mar 15:15:1372318. doi: 10.3389/fpls.2024.1372318. Kim et al. (2024) . Photoautotrophic cultivation of a <i>Chlamydomonas reinhardtii</i> mutant with zeaxanthin as the sole xanthophyll. <i>Biotechnol Biofuels Bioprod.</i> 2024 Mar 14;17(1):41. doi: 10.1186/s13068-024-02483-8. Ye et al. (2023) . The light-harvesting chlorophyll a/b-binding proteins of photosystem II family members are responsible for temperature sensitivity and leaf color phenotype in albino tea plant. <i>J Adv Res.</i> 2023 Dec 25:S2090-1232(23)00404-6.doi: 10.1016/j.jare.2023.12.017. Singh, Muthamilarasan, Prasad (2022) . SiHSPA2e regulated expression of SisHSP21.9 maintains chloroplast proteome

integrity under high temperature stress. *Cell Mol Life Sci.* 2022;79(11):580. Published 2022 Nov 3. doi:10.1007/s00018-022-04611-10

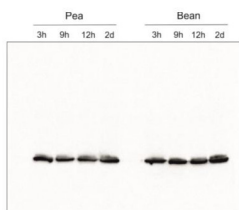
[Cazzaniga](#) et al. (2022). Engineering astaxanthin accumulation reduces photoinhibition and increases biomass productivity under high light in *Chlamydomonas reinhardtii*. *Biotechnol Biofuels Bioprod.* 2022 Jul 11;15(1):77. doi: 10.1186/s13068-022-02173-3. PMID: 35820961; PMCID: PMC9277849.

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Species and variants: Pea – *Pisum sativum* L. Bean – *Phaseolus coccineus* L. 3h – 3 hours of cold exposure 9h – 9 hours of cold exposure 12h – 12 hours of cold exposure 2d – 2 days of cold exposure

Samples of isolated thylakoids containing 3 µg of chlorophyll were denatured with Laemmli buffer (1 vol : 1 vol) at 75 °C for 5 min. Denatured samples containing 1 µg of chlorophyll were loaded in the gel wells, separated on 12% SDS-PAGE gels and blotted for 45 min at 100 V to PVDF membrane using wet transfer. Blot was blocked with 5% milk in TBS-T for 60 min at room temperature (RT) with agitation. The blot was incubated with the primary antibody at a dilution of 1:500 in 1% Amersham™ ECL Prime Blocking Agent in TBS-T overnight at 4°C with agitation. The antibody solution was decanted and the blot was washed 3 times for 5 min in TBS-T at RT with agitation. The blot was incubated using a secondary antibody (goat anti-rabbit IgG HRP conjugated, from Agrisera, [AS09_602](#)) diluted to 1: 25 000 in 1% milk in TBS-T for 1h at RT with agitation. The blot was washed 5 times for 5 min in TBS-T, 1 time for 5 min in TBS, 1 time for 5 min in 0.1 M Tris (pH 8.5), and developed for 4 min in substrates (0.188 mM coumaric acid, 1.25 mM luminol, 0.01% H₂O₂). Exposure time was 5 seconds in ChemiDoc scanner (BioRad).

Msc Małgorzata Krysiak, Faculty of Biology, University of Warsaw, Poland