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Product no AS01 006

Anti-Lhca2 | PSI type II chloropyll a/b-binding protein

Product information

Immunogen	BSA-conjugated synthetic peptide derived from the Lhca2 protein of *Arabidopsis thaliana* UniProt: Q9SYW8, Q8LCQ4, TAIR: At3g61470. This sequence is highly conserved in Lhca2 proteins of angiosperms (monocots and dicots) and gymnosperms as well as in At1g19150. This gene codes for the very low expressed Lhca6 protein which also has been denoted as Lhca2*1.
Host	Rabbit
Clonality	Polyclonal
Purity	Total IgG. Protein G purified in PBS pH 7.4.
Format	Lyophilized
Quantity	0.5 mg
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	Antibody format is a total IgG fraction, which means that it is a pool of polyclonal antibodies obtained by purification of serum on Protein G, not on a specific antigen column.

Application information

Recommended dilution	1 : 2000-1 : 5000 (WB)
Expected | apparent MW	27.7 | 24 kDa for *Arabidopsis thaliana*
Confirmed reactivity	*Arabidopsis thaliana, Arachis hypogaea, Bryopsis corticulans, Colobanthus quitensis* Kunt Bartl*, Chlamydomonas reinhardti (one Lhca-type), Citrus reticulata, Chromochloris zofingiensis, Cytisus cantabricus* (Wilk.) Rchb. F.*, Hieracium pilosella* L, *Hordeum vulgare, Lasallia hispanica, Nicotiana tabacum, Oryza sativa, Pisum sativum, Phaseolus vulgaris, Physcomitrium patens, Pinus banksiana* (the higher of the two bands detected at 24 and 30 kDa is not considered to be specific to any Lhc protein), *Posidonia oceanica, Prasinoderma* sp., *Pyramimonas* sp. *Spinacia oleracea, Syntrichia muralis* (Hedw.) Raab*, Triticum aestivum, Triticale, Zea mays*
Predicted reactivity	Dicots, Gymnosperms
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Selected references	Zhao et al. (2024). Psb28 protein is indispensable for stable accumulation of PSII core complexes in Arabidopsis.Plant J. 2024 May 26. doi: 10.1111/tpj.16844. Sarvari et al. (2022). Qualitative and quantitative evaluation of thylakoid complexes separated by Blue Native PAGE. Plant Methods. 2022 Mar 3;18(1):23. doi: 10.1186/s13007-022-00858-2. PMID: 35241118; PMCID: PMC8895881. Fukura et al. (2021) Enrichment of chlorophyll catabolic enzymes in grana margins and their cooperation in catabolic reactions. J Plant Physiol. 2021 Nov;266:153535. doi: 10.1016/j.jplph.2021.153535. Epub 2021 Sep 25. PMID: 34607178. Zhu et al. (2020). A NAC transcription factor and its interaction protein hinder abscisic acid biosynthesis by synergistically repressing NCED5 in Citrus reticulata. J Exp Bot. 2020 Jun 22;71(12):3613-3625.doi: 10.1093/jxb/eraa118. Their et al. (2020). VIPP2 interacts with VIPP1 and HSP22E/F at chloroplast membranes and modulates a retrograde signal for HSP22E/F gene expression. Plant Cell Environ. 2020 Jan 29. doi: 10.1111/pce.13732. Vojta and Fulgosi (2019). Topology of TROL protein in thylakoid membranes of Arabidopsis thaliana. Physiol Plant. 2019 Jan 20. doi: 10.1111/ppl.12927.

Application example

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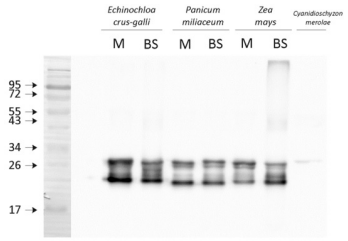

1.0 µg of chlorophyll from mesophyll (M) and bundle sheath (BS) thylakoids of various C4 plants (*Echinochloa crus-galli, Panicum miliaceum, Zea mays*) extracted with 0.4 M sorbitol, 50 mM Hepes NaOH, pH 7.8, 10 mM NaCl, 5 mM MgCl2 and 2 mM EDTA. Samples were denatured with Laemmli buffer at 75 0C for 5 min and were separated on 12% SDS-PAGE and blotted 30 min to PVDF using wet transfer. Blot was blocked with 5% milk for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 2000 overnight at 4°C with agitation in 1% milk in TBS-T. The antibody solution was decanted and the blot was washed 4 times for 5 min in TBS-T at RT with agitation. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, from Agrisera, AS09 602, Lot 1702) 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 and 2 times for 5 min in TBS, and developed for 1 min with 1.25 mM luminol, 0.198 mM coumaric acid and 0.009% H_2O_2 in 0.1 M Tris- HCl, pH 8.5. Exposure time in ChemiDoc System was 15 seconds.

Courtesy of Dr. Wioleta Wasilewska, Warsaw University, Poland