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Agrisera AB | Box 57 | SE-91121 Vännäs | Sweden | +46 (0)935 33 000 | www.agrisera.com

Product no AS01 008

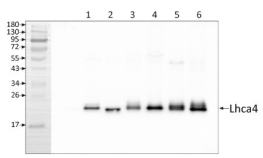
Anti-Lhca4 | PSI type IV chlorophyll a/b-binding protein

Product information

Immunogen	BSA-conjugated synthetic peptide derived from the Lhca4 protein of*Arabidopsis thaliana* UniProt: P27521, TAIR: At3g47470. This sequence is highly conserved in Lhca4 proteins of angiosperms (monocots and dicots) and gymnosperms.
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.

Application information

Recommended dilution	1 : 2000-1 : 5000 (WB)
Expected | apparent MW	27.7 | 21 kDa for *Arabidopsis thaliana*
Confirmed reactivity	*Arabidopsis thaliana, Bryopsis corticulans, Citrus reticulata, Echinochloa crus-galli, Fortunella margarita* Swingle, *Hordeum vulgare, Mesembryanthemum crystallinum, Nicotiana tabacum, Oryza sativa, Physcomitrium patens, Pisum sativum, Posidonia oceanica, Spinacia oleracea, Triticum aestivum, Triticale, Zea mays*
Predicted reactivity	Dicots, Gymnosperms
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
Additional information	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 Arabidopsis egy1 Mutant. J. Plant Biol. doi.org/10.1007/s12374-026-09509-8. 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. 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 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. Forlani et al. (2020. HEBE, a novel positive regulator of senescence in Solanum lycopersicum. Sci Rep. 2020 Jul 3;10(1):11021.doi: 10.1038/s41598-020-67937-z. Chen et al. (2019). Effects of Stripe Rust Infection on the Levels of Redox Balance and Photosynthetic Capacities in Wheat. Int J Mol Sci. 2019 Dec 31;21(1). pii: E268. doi: 10.3390/ijms21010268.



1 µg of chlorophyll from *Pisum sativum* **(1)**, *Mesembryanthemum crystallinum* **(2)**, mesophyll **(3)** and bundle sheath **(4)** of *Zea mays*, mesophyll **(5)** and bundle sheath **(6)** of *Echinochloa crus-galli* chloroplasts extracted with 0.4 M sorbitol, 50 mM Hepes NaOH, pH 7.8, 10 mM NaCl, 5 mM MgCl2 and 2 mM EDTA were loaded to lanes. 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 2h at room temperature (RT) with agitation. Blot was incubated in the primary antibody Anti-Lhca4 (LOT 1908) at a dilution of 1: 3000 in 1% milk in TBS-T overnight at 4°C with agitation. 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 HRP conjugated, from Agrisera, AS09 602, LOT 1905) diluted to 1:20 000 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

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coumaric acid and 0.009% H_2O_2 in 0.1 M Tris- HCl, pH 8.5. Exposure time in ChemiDoc System was 30 seconds.

Courtesy of Dr. Wioleta Wasilewska-Dębowska, Warsaw University, Poland