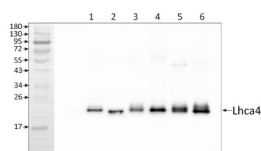


Product no **AS01 008****Lhca4 | PSI type IV chlorophyll a/b-binding protein****Product information**

<b>Immunogen</b>	BSA-conjugated synthetic peptide derived from the Lhca4 protein of <i>Arabidopsis thaliana</i> UniProt: <a href="#">P27521</a> , TAIR: <a href="#">At3g47470</a> . This sequence is highly conserved in Lhca4 proteins of angiosperms (monocots and dicots) and gymnosperms.
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Purity</b>	Total IgG. Protein G purified in PBS pH 7.4.
<b>Format</b>	Lyophilized
<b>Quantity</b>	0.5 mg
<b>Reconstitution</b>	For reconstitution add 100 µl of sterile water
<b>Storage</b>	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**

<b>Recommended dilution</b>	1 : 2000-1 : 5000 (WB)
<b>Expected   apparent MW</b>	27.7   21 kDa for <i>Arabidopsis thaliana</i>
<b>Confirmed reactivity</b>	<i>Arabidopsis thaliana</i> , <i>Bryopsis corticulans</i> , <i>Citrus reticulata</i> , <i>Echinochloa crus-galli</i> , <i>Fortunella margarita</i> Swingle, <i>Hordeum vulgare</i> , <i>Mesembryanthemum crystallinum</i> , <i>Nicotiana tabacum</i> , <i>Oryza sativa</i> , <i>Physcomitrium patens</i> , <i>Pisum sativum</i> , <i>Posidonia oceanica</i> , <i>Spinacia oleracea</i> , <i>Triticum aestivum</i> , <i>Triticale</i> , <i>Zea mays</i>
<b>Predicted reactivity</b>	Dicots, Gymnosperms
<b>Not reactive in</b>	No confirmed exceptions from predicted reactivity are currently known
<b>Additional information</b>	Protein is processed into mature form ( <a href="#">Jansson</a> 1999).
<b>Selected references</b>	<a href="#">Sarvari</a> et al. (2022). Qualitative and quantitative evaluation of thylakoid complexes separated by Blue Native PAGE. <i>Plant Methods</i> . 2022 Mar 3;18(1):23. doi: 10.1186/s13007-022-00858-2. PMID: 35241118; PMCID: PMC8895881. <a href="#">Ivanov</a> et al. (2022) The decreased PG content of ppp1 inhibits PSI photochemistry and limits reaction center and light-harvesting polypeptide accumulation in response to cold acclimation. <i>Planta</i> 255, 36 (2022). <a href="https://doi.org/10.1007/s00425-022-03819-0">https://doi.org/10.1007/s00425-022-03819-0</a> <a href="#">Zhu</a> et al. (2020). A NAC transcription factor and its interaction protein hinder abscisic acid biosynthesis by synergistically repressing NCED5 in <i>Citrus reticulata</i> . <i>J Exp Bot</i> . 2020 Jun 22;71(12):3613-3625. doi: 10.1093/jxb/eraa118. <a href="#">Forlani</a> et al. (2020). HEBE, a novel positive regulator of senescence in <i>Solanum lycopersicum</i> . <i>Sci Rep</i> . 2020 Jul 3;10(1):11021. doi: 10.1038/s41598-020-67937-z. <a href="#">Chen</a> et al. (2019). Effects of Stripe Rust Infection on the Levels of Redox Balance and Photosynthetic Capacities in Wheat. <i>Int J Mol Sci</i> . 2019 Dec 31;21(1). pii: E268. doi: 10.3390/ijms21010268.

**Application example**

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 MgCl<sub>2</sub> and 2 mM EDTA were loaded to lanes. Samples were denatured with Laemmli buffer at 75 °C 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 coumaric acid and 0.009% H<sub>2</sub>O<sub>2</sub> in 0.1 M Tris- HCl, pH 8.5. Exposure time in ChemiDoc System was 30 seconds.



This product is **for research use only** (not for diagnostic or therapeutic use)

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