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Product no AS01 008

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

Product information

Background	The light-harvesting protein **Lhca4** is one of the four main and highly conserved types of chlorophyll a/b-binding proteins (Lhca1-4) of the light harvesting antenna (LHCI) of plant photosystem I. Lhca4 is imported as a precursor from the cytosol into the chloroplast. Upon insertion into the thylakoid membrane Lhca4 forms a heterodimer (LHCI-730) with Lhca1 that associates with the PSI core close to PsaG and PsaF. A biochemical characterization of the plant LHCI antenna can be found in Klimmek et al. (2005) The structure of the higher plant light harvesting complex I: in vivo characterization and structural interdependence of the Lhca proteins. Biochemistry 44: 3065–3073.
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
Format	Lyophilized in PBS pH 7.4
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 tubes briefly prior to opening them to avoid any losses that might occur from lyophilized material adhering to the cap or sides of the tubes.
Tested applications	Western blot (WB)
Related products	AS01 011 | A set of 10 plant anti-Lhca and anti-Lhcb antibodies AS01 011 Chlamydomonas | A set of anti-Lhc antibodies for *Chlamydmonas* Available antibodies against pigment-binding proteins- LHC recommended secondary antibody Plant protein extraction buffer Secondary antibodies

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, Physcomitrella 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).For high resolution images, please visit the specific product page at www.agrisera.com

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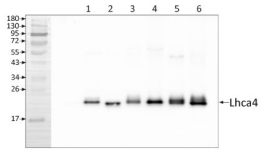
For high resolution images, please visit the specific product page at www.agrisera.com

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 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 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