

Agrisera

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Product no **AS01 003**

Lhcb2 | LHCII type II chlorophyll a/b-binding protein

Product information

Background	<p>The major light-harvesting antenna complex II (LHCII) in photosynthetic eukaryotes is located in the thylakoid membrane of the chloroplast. It is a heterotrimeric complex formed by up to 3 different individual subtypes of chlorophyll a/b-binding proteins: Lhcb1, Lhcb2, and Lhcb3. Lhcb2 is often coded by several nuclear genes and is found together with Lhcb1 within the mobile LHCII trimers involved in state1-state2 transition.</p> <p>A molecular characterisation of the LHCII proteins can be found in Caffari et al. (2004) A Look within LHCII: Differential Analysis of the Lhcb1–3 Complexes Building the Major Trimeric Antenna Complex of Higher-Plant Photosynthesis. Biochemistry 43 (29): 9467–9476.</p>
Immunogen	<p><u>BSA</u>-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: Q9SHR7, TAIR: AT2G05100, Lhcb2.2 UniProt: Q9S7J7, TAIR: AT2G05070, Lhcb2.3 UniProt: Q9XF87, TAIR: AT3G27690</p>
Host	Rabbit
Clonality	Polyclonal
Purity	Affinity purified serum
Format	Lyophilized in PBS pH 7.4.
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 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	Immunoprecipitation (IP), ImmunoGold (IG), Western blot (WB)
Related products	<p>AS01 002 Anti-Lhcb3 LHCII type III chlorophyll a/b-binding protein, rabbit antibodies</p> <p>AS01 004 Anti-Lhcb1 LHCII type I chlorophyll a/b-binding protein, rabbit antibodies</p> <p>AS13 2705 Anti-Lhcb2-P LHCII type II chlorophyll a/b-binding protein, phosphorylated, rabbit antibodies</p> <p>Plant protein extraction buffer</p>

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>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 tabacum</i> , <i>Oryza sativa</i> , <i>Pisum sativum</i> , <i>Phaseolus coccineus</i> L., <i>Phaseolus vulgaris</i> , <i>Physcomitrella patens</i> , <i>Sinapsis alba</i> , <i>Spinacia oleracea</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	<p>Immunoprecipitation has been done using Immunoprecipitation kit from Roche, Cat.No. 11 719 386 001.</p> <p>Protein is processed into mature form (Jansson 1999).</p>

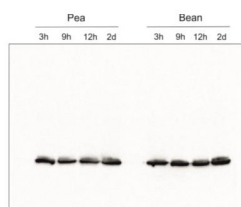
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Application example



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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).

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