

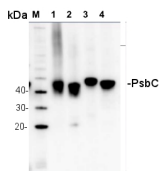
Product no **AS11 1787****PsbC | CP43 protein of PSII****Product information**

<b>Immunogen</b>	KLH-conjugated synthetic peptide chosen from known sequences of PsbC including <i>Arabidopsis thaliana</i> PsbC, UniProt: <a href="#">P56778</a> , TAIR: <a href="#">AtCg00280</a>
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Purity</b>	Serum
<b>Format</b>	Lyophilized
<b>Quantity</b>	50 µl
<b>Reconstitution</b>	For reconstitution add 50 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.
<b>Additional information</b>	Contains 0,01% ProClin

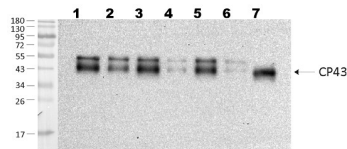
**Application information**

<b>Recommended dilution</b>	1 : 3 000 (WB)
<b>Expected   apparent MW</b>	45   43 kDa
<b>Confirmed reactivity</b>	<i>Arabidopsis thaliana</i> , <i>Chlamydomonas reinhardtii</i> , <i>Chlorella sorokiniana</i> , <i>Chlorella vulgaris</i> , <i>Chromochloris zofingiensis</i> , <i>Echinochloa crus-galli</i> , <i>Hordeum vulgare</i> , <i>Oryza sativa</i> , <i>Panax ginseng</i> , <i>Physcomitrium patens</i> , <i>Pisum sativum</i> , <i>Phaseolus vulgaris</i> , <i>Pyropia yezoensis</i> , <i>Synochococcus</i> sp. PCC7002, <i>Synechocystis</i> sp. PCC6803, <i>Tillandsia flabellate</i> , <i>Triticum aestivum</i> , <i>Triticale</i> , <i>Zea mays</i> , <i>Verbascum lychnitis</i> , <i>Vigna radiata</i>
<b>Predicted reactivity</b>	<i>Asimina parviflora</i> , <i>Borago officinalis</i> , <i>Cannabis sativa</i> , <i>Carthamus persicus</i> , <i>Casimirella guaranitica</i> , <i>Catalpa bungei</i> , <i>Calatola mollis</i> , <i>Citron x limon</i> , <i>Cunninghamia lanceolata</i> , <i>Deeringothamnus rugelii</i> , <i>Gonystylus bancanus</i> , <i>Ipomopsis aggregata</i> , <i>Leretia cordata</i> , <i>Lobatiriccardia lobata</i> , <i>Myricaria germanica</i> , <i>Nostoc</i> sp. PCC7120, <i>Nannochloropsis</i> sp., <i>Natsiatum herpeticum</i> , <i>Nicotiana benthamiana</i> , <i>Nothapodytes montana</i> , <i>Nerium oleander</i> , <i>Ottoschulzia rhodoxylon</i> , <i>Oxandra lanceolata</i> , <i>Solanum tuberosum</i> , <i>Oryza sativa</i> , <i>Panax quinquefolius</i> , <i>Prosopidastrum angusticarpum</i> , <i>Prosopis glandulosa</i> , <i>Rollinia mucosa</i> , <i>Rosmarinus officinalis</i> , <i>Saxifraga rivularis</i> , <i>Spinacia oleracea</i> , <i>Zelkova serrata</i> , <i>Zinnia violacea</i> , <i>Vachellia caven</i> , <i>Vitis vinifera</i> , <i>Zosteria marina</i> , <i>Xerocladia viridiramis</i>
	Species of your interest not listed? <a href="#">Contact us</a>
<b>Not reactive in</b>	diatoms
<b>Additional information</b>	In C4 plants like <i>Echinochloa crus-galli</i> and <i>Zea mays</i> antibody detects 2 bands.
<b>Selected references</b>	<a href="#">Kim et al. (2024)</a> . Photoautotrophic cultivation of a <i>Chlamydomonas reinhardtii</i> mutant with zeaxanthin as the sole xanthophyll. <i>Biotechnol Biofuels Bioprod.</i> 2024 Mar 14;17(1):41. doi: 10.1186/s13068-024-02483-8. <a href="#">Khaig and Eaton-Rye (2023)</a> . Lys264 of the D2 Protein Performs a Dual Role in Photosystem II Modifying Assembly and Electron Transfer through the Quinone–Iron Acceptor Complex. <i>Biochemistry</i> 2023, 62, 18, 2738–2750 <a href="#">Kafri et al. (2023)</a> . Systematic identification and characterization of genes in the regulation and biogenesis of photosynthetic machinery. <i>Cell.</i> 2023 Dec 7;186(25):5638-5655.e25. doi: 10.1016/j.cell.2023.11.007. <a href="#">Beckova et al. (2022)</a> . Photosystem II antenna modules CP43 and CP47 do not form a stable 'no reaction centre complex' in the cyanobacterium <i>Synechocystis</i> sp. PCC 6803. <i>Photosynth Res.</i> 2022 Jan 11. doi: 10.1007/s11120-022-00896-w. Epub ahead of print. PMID: 35015206. <a href="#">Cecchin et al (2021)</a> LPA2 protein is involved in photosystem II assembly in <i>Chlamydomonas reinhardtii</i> . <i>Plant J.</i> 2021 Jul 4. doi: 10.1111/tpj.15405. Epub ahead of print. PMID: 34218480. <a href="#">Okegawa et al (2021)</a> Maintaining the Chloroplast Redox Balance Through the PGR5-Dependent Pathway and the Trx System is Required for Light-Dependent Activation of Photosynthetic Reactions. <i>Plant Cell Physiol.</i> 2021 Oct 8;pcab148. doi: 10.1093/pcp/pcab148. Epub ahead of print. PMID: 34623443.

## Application example



**5 µg of total protein** from (1) *Arabidopsis thaliana* leaf extracted with **Protein Extraction Buffer**, PEB (**AS08 300**), (2) *Hordeum vulgare* leaf extracted with PEB, (3) *Chlamydomonas reinhardtii* total cell extracted with PEB, (4) *Synechococcus* sp. 7942 total cell extracted with PEB, extracted with PEB were separated on **4-12% NuPage** (Invitrogen) **LDS-PAGE** and blotted 1h to **PVDF**. Blots were blocked immediately following transfer in 2% blocking reagent in 20 mM Tris, 137 mM sodium chloride pH 7.6 with 0.1% (v/v) Tween-20 (TBS-T) for 1h at room temperature with agitation. Blots were incubated in the primary antibody at a dilution of 1: 10 000 for 1h at room temperature with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in TBS-T at room temperature with agitation. Blots were incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, recommended secondary antibody **AS09 602**) diluted to 1:25 000 in 2% blocking solution for 1h at room temperature with agitation. The blots were washed as above and developed for 5 min with chemiluminescent detection reagent according to the manufacturers instructions. Images of the blots were obtained using a CCD imager (FluorSMax, Bio-Rad) and Quantity One software (Bio-Rad). Exposure time was 75 seconds.



1.5 µg of chlorophyll from thylakoids of various treatments of *Echinochloa crus-galli* (1-2), *Zea mays* (3-5), *Pisum sativum* (6-7), 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. 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% fatty acid free milk for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 3 000 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, **AS09 602**, Agrisera ) 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<sub>2</sub>O<sub>2</sub> in 0.1 M Tris- HCl, pH 8.5. Exposure time in ChemiDoc System was 240 seconds.

Courtesy of Dr. Wiola Wasilewska, Warsaw University, Poland