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Product no AS11 1787

Anti-PsbC | CP43 protein of PSII

Product information

Immunogen	KLH-conjugated synthetic peptide chosen from known sequences of PsbC including *Arabidopsis thaliana* PsbC, UniProt: P56778, TAIR: AtCg00280
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl
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 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.
Additional information	Contains 0,01% ProClin

Application information

Recommended dilution	1 : 3 000 (WB)
Expected | apparent MW	45 | 43 kDa
Confirmed reactivity	*Arabidopsis thaliana*, *Chlamydomonas reinhardtii,Chlorella sorokiniana, Chlorella vulgaris, Chromochloris zofingiensis, Echinochloa crus-galli, Hordeum vulgare, Oryza sativa, Panax ginseng, Physcomitrium patens, Pisum sativum, Phaseolus vulgaris, Pyropia yezoensis, Synochococcus* sp. PCC7002, *Synechocystis sp.* PCC6803, *Tillandsia flabellate, Triticum aestivum*, *Triticale*, *Zea mays*, *Verbascum lychnitis*, *Vigna radiate*
Predicted reactivity	*Asimina parviflora, Borago officinalis, Cannabis sativa, Carthamus persicus, Casimirella guaranitica , Catalpa bungei, Calatola mollis, Citron x limon, Cunninghamia lanceolata, Deeringothamnus rugelii, Gonystylus bancanus, Ipomopsis aggregata, Leretia cordata, Lobatiriccardia lobata, Myricaria germanica , Nostoc* sp. PCC7120, *Nannochloropsis sp., Natsiatum herpeticum, Nicotiana benthamiana, Nothapodytes montana , Nerium oleander, Ottoschulzia rhodoxylon, Oxandra lanceolata,Solanum tuberosum, Oryza sativa, Panax quinquefolius, Prosopidastrum angusticarpum, Prosopis glandulosa, Rollinia mucosa, Rosmarinus officinalis, Saxifraga rivularis, Spinacia oleracea, Zelkova serrata, Zinnia violacea, Vachellia caven, Vitis vinifera, Zosteria marina, Xerocladia viridiramis* Species of your interest not listed? Contact us
Not reactive in	Diatoms
Additional information	In C4 plants like *Echinochloa crus-galli* and *Zea mays* antibody detects 2 bands.
Selected references	McKenzie and Puthiyaveetil(2025). Protein phosphorylation and oxidative protein modification promote plant photosystem II disassembly for repair. Plant Commun . 2025 Mar 10;6(3):101202. doi: 10.1016/j.xplc.2024.101202. Sakurabata et al. (2024). HASTY-mediated miRNA dynamics modulate nitrogen starvation-induced leaf senescence in Arabidopsis. Nat Commun. 2024 Sep 10;15(1):7913. doi: 10.1038/s41467-024-52339-w. Zhao et al. (2024). Psb28 protein is indispensable for stable accumulation of PSII core complexes in Arabidopsis.Plant J. 2024 May 26. doi: 10.1111/tpj.16844. Ciesielska et al. (2024). S2P2-the chloroplast-located intramembrane protease and its impact on the stoichiometry and functioning of the photosynthetic apparatus of A. thaliana. Front Plant Sci. 2024 Mar 15:15:1372318. doi: 10.3389/fpls.2024.1372318. Kim et al. (2024).Photoautotrophic cultivation of a Chlamydomonas reinhardtii mutant with zeaxanthin as the sole xanthophyll. Biotechnol Biofuels Bioprod. 2024 Mar 14;17(1):41. doi: 10.1186/s13068-024-02483-8. Khaig and Eaton-Rye (2023).Lys264 of the D2 Protein Performs a Dual Role in Photosystem II Modifying Assembly and Electron Transfer through the Quinone–Iron Acceptor Complex. Biochemistry 2023, 62, 18, 2738–2750 Kafri et al. (2023). Systematic identification and characterization of genes in the regulation and biogenesis of photosynthetic machinery. Cell. 2023 Dec 7;186(25):5638-5655.e25.doi: 10.1016/j.cell.2023.11.007. Beckova et al. (2022). Photosystem II antenna modules CP43 and CP47 do not form a stable 'no reaction centre complex' in the cyanobacterium Synechocystis sp. PCC 6803. Photosynth Res. 2022 Jan 11. doi: 10.1007/s11120-022-00896-w. Epub ahead of print. PMID: 35015206. Cecchin et al (2021) LPA2 protein is involved in photosystem II assembly in Chlamydomonas reinhardtii. Plant J. 2021 Jul 4. doi: 10.1111/tpj.15405. Epub ahead of print. PMID: 34218480. Okegawa et al (2021) Maintaining the Chloroplast Redox Balance Through the PGR5-Dependent Pathway and the Trx System is Required for Light-Dependent Activation of Photosynthetic Reactions. Plant Cell Physiol. 2021 Oct

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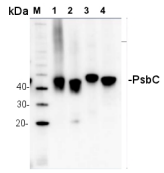
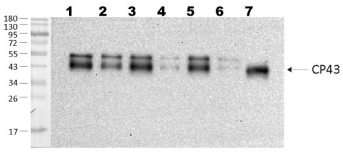
8:pcab148. doi: 10.1093/pcp/pcab148. Epub ahead of print. PMID: 34623443.



5 µg of total protein from (**1**) *Arabidopsis thaliana* leaf extracted with **P**rotein **E**xtration **B**uffer, 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 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 MgCl2 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% H2O2 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