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Product no AS04 042P

PsaC | PSI-C core subunit of photosystem I (PsaC antibody + PsaC protein positive control)

Product information

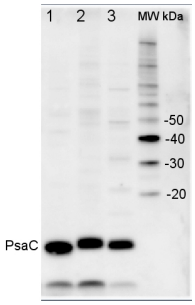
Immunogen	KLH-conjugated synthetic peptide conserved in all known PsaC proteins including*Arabidopsis thaliana* AtCg01060, *Hordeum vulgare* P69416, *Oryza sativa* P0C360, *Chlamydomonas reinhardtii* Q00914, *Synechococcus elongatus* Q31QV2
Host	Rabbit
Clonality	Polyclonal
Purity	Serum
Format	Lyophilized
Quantity	50 µl anti-PsaC antibody, 100 µl PsaC protein standard
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.
Additional information	Peptide target used to elicit this antibody is well conserved in all photoautotrophs except some cyanobacteria, some red algae and *Cyanophora paradoxa*, which contain a conserved substitution of a valine to an isoleucine. The performance of the antibodies has been confirmed against taxa containing both the valine and isoleucine variants. For reconstitution of PsaC antibodies (AS10 939) add 50 µl of sterile water. For reconstitution of PsaC positive control add 100 µl of sterile water.

Application information

Recommended dilution	1 : 1000 (WB)
Expected | apparent MW	9 kDa
Confirmed reactivity	*Arabidopsis thaliana, Chlamydomonas reinhardtii, Cyanophora paradoxa, Heterosigma akashiwo, Emiliania huxleyi, Euglena gracilis, Gonyaulax polyedra, Horderum vulgare, Micromonas pusilla, Porphyra sp. Spinacia oleracea, Synechococcus* PCC 7942, *Thalassiosira pseudonan*
Predicted reactivity	Algae, *Cyanobacteria, Glycine max, Nicotiana tabacum, Physcomitrella patens, Prochlorococcus sp.* (surface and a deep water ecotype), *Spinacia oleracea* Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known.
Additional information	In some species minor cross reactions with some larger proteins are seen. These may contain related iron-sulfur binding motifs. Therefore size verification of the reacting band is required. Due to the small size of the protein, care should be taken to differentiate between chemiluminescent signal from PsaC and non-specific signals from chlotophylls or lipids if pigment is retained near the bottom of the blot. **Protein standard:** use a load of 2 µl per well with ECL detection system and 4 µl per well with alkaline phospatase. For high resolution images, please visit the specific product page at www.agrisera.com
Selected references	Pralon et al. (2019). Plastoquinone homoeostasis by Arabidopsis proton gradient regulation 6 is essential for photosynthetic efficiency. Commun Biol. 2019 Jun 20;2:220. doi: 10.1038/s42003-019-0477-4. Oesterhelt et al (2007). Regulation of photosynthesis in the unicellular acidophilic red alga Galdieria sulphuraria. Plant J.3:500511. Ifuku et al. (2005). PsbP protein, but not PsbQ protein, is essential for the regulation and stabilization of photosystem

II in higher plants. Plant Physiol. 3:1175-1184.

Application example



2 µg of total protein from *Horderum vulgare* **(1)**, *Chlamydomonas reinhardtii* total cell **(2)**, *Synechococcus* sp. 7942 total cell **(3), were** extracted with PEB (**AS08 300**) and separated on **4-12%** NuPage (Invitrogen) **LDS-PAGE** and blotted 1h to **PVDF**. Blots were blocked immediately following transfer in 2% blocking reagent (GE Healthcare) 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: 50 000 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) diluted to 1:10 000 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).