

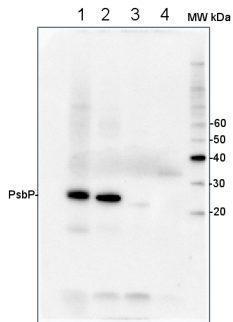
Product no **AS06 142-23****Anti-PsbP | 23 kDa protein of the oxygen evolving complex (OEC) of PSII (anti-protein)****Product information**

<b>Immunogen</b>	native, purified 23 kDa protein from <i>Spinacia oleracea</i> , UniProt: <a href="#">P12302</a>
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Purity</b>	Total IgG. Protein G purified in PBS pH 7.4.
<b>Format</b>	Lyophilized
<b>Quantity</b>	200 µg
<b>Reconstitution</b>	For reconstitution add 200 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.

**Application information**

<b>Recommended dilution</b>	1 : 2000-1 : 5000 (WB)
<b>Expected   apparent MW</b>	28   23 kDa
<b>Confirmed reactivity</b>	<i>Arabidopsis thaliana</i> , <i>Chlamydomonas reinhardtii</i> , <i>Hordeum vulgare</i> , <i>Pinus banksiana</i> , <i>Spinacia oleracea</i> , <i>Triticum aestivum</i>
<b>Predicted reactivity</b>	<i>Musa acuminata</i> , <i>Oryza sativa</i> , <i>Pinus monticola</i> , <i>Pisum sativum</i> , <i>Populus balsamifera</i> , <i>Solanum lycopersicum</i> Species of your interest not listed? <a href="#">Contact us</a>
<b>Not reactive in</b>	<i>Synechococcus</i> sp. PCC 7942
<b>Additional information</b>	Load per well on cell extract of <i>Pinus banksiana</i> (Jack Pine) was 7 µg.  This antibody can be used as a loading control for <i>Chlamydomonas reinhardtii</i> while it not so suitable for higher plants as accumulation of these proteins might drop to 12.5-25 % of the WT level in mutants defective for PSII core ( <a href="#">Schult</a> et al. 2007).
<b>Selected references</b>	<a href="#">Collombat</a> et al. (2025). Arabidopsis conditional photosynthesis mutants abc1k1 and var2 accumulate partially processed thylakoid preproteins and are defective in chloroplast biogenesis. Commun Biol . 2025 Jan 22;8(1):111. doi: 10.1038/s42003-025-07497-y. <a href="#">Mu</a> et al. (2024). Plastid HSP90C C-terminal extension region plays a regulatory role in chaperone activity and client binding. Plant J. 2024 Jul 5. doi: 10.1111/tpj.16917. <a href="#">Lim</a> et al (2022). Arabidopsis guard cell chloroplasts import cytosolic ATP for starch turnover and stomatal opening. Nat Commun. 2022 Feb 3;13(1):652. doi: 10.1038/s41467-022-28263-2. PMID: 35115512; PMCID: PMC8814037. <a href="#">Lim</a> et al (2022) Arabidopsis guard cell chloroplasts import cytosolic ATP for starch turnover and stomatal opening. Nat Commun. 2022 Feb 3;13(1):652. doi: 10.1038/s41467-022-28263-2. PMID: 35115512; PMCID: PMC8814037. <a href="#">Cecchin</a> 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. <a href="#">Jiang</a> et al. (2020). Plastid chaperone HSP90C guides precursor proteins to the SEC translocase for thylakoid transport. J Exp Bot. 2020 Aug 27;eraa399. doi: 10.1093/jxb/eraa399. <a href="#">Nama</a> et al. (2018). Non-photochemical quenching-dependent acclimation and thylakoid organization of Chlamydomonas reinhardtii to high light stress. Photosynth Res. 2018 Jul 7. doi: 10.1007/s11120-018-0551-7.

**Application example**



**2 µg of total protein** from *Arabidopsis thaliana* leaf (1) *Hordeum vulgare* leaf (2), *Chlamydomonas reinhardtii* total cell (3), *Synechococcus* sp. 7942 total cell (4), all 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 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) diluted to 1:50 000 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).