

product **AS11 1786**

PsbA | D1 protein of PSII, N-terminal

product information

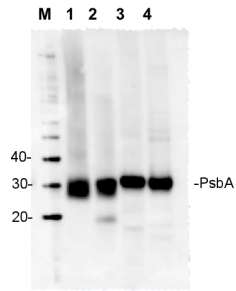
background	The psbA gene has been cloned from many species of plants, green algae, and cyanobacteria. The psbA gene is located in the chloroplast genome and encodes for the D1 protein, a core component of Photosystem II. PsbA/D1 is rapidly cycled under illumination in all oxygenic photobionts. Tracking PsbA pools using the Global PsbA antibody can show the functional content of Photosystem II in a wide range of samples.
immunogen	<u>KLH</u> -conjugated synthetic peptide derived from N-terminal of available plant, algal and cyanobacterial PsbA sequences, including <i>Arabidopsis thaliana</i> UniProt: <u>A4QJR4</u> , TAIR: <u>AtCg00020</u> , <i>Oryza sativa</i> <u>P0C434</u> , <i>Populus alba</i> <u>Q14FH6</u> , <i>Physcomitrella patens</i> <u>Q6YXN7</u> , <i>Chlamydomonas reinhardtii</i> <u>P07753</u> , <i>Synechocystis</i> sp. <u>P14660</u> and many others
antibody format	rabbit polyclonal serum lyophilized
quantity	200 µl for reconstitution add 200 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	western blot (WB)
related products	<u>AS01 016</u> anti-PsbA C-terminal chicken antibody <u>AS05 084</u> anti-PsbA C-terminal rabbit antibody AS11 1786 PsbA D1 protein of PSII, N-terminal, rabbit antibody <u>AS13 2669</u> PsbA D1 protein of PSII, phosphorylated, rabbit antibody <u>AS05 084PRE</u> PsbA D1 protein of PSII, C-terminal, pre-immune serum <u>AS10 704</u> anti-PsbA D1 protein of PSII, DE-loop <u>AS01 016S</u> PsbA protein standard for quantitation and positive control
additional information	Peptide target used for antibody production comes from Helix 1 of PSII, lumenal exposed loop. Antibodies are going to recognize the target in a wide range of species.

application information

recommended dilution	1:1000 with standard ECL, or 1: 10 000 with ECL Advance (WB)
expected apparent MW	38 28-30 kDa
confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Hordeum vulgare</i> , <i>Chlamydomonas reinhardtii</i> , <i>Synechococcus</i> sp. 7942
predicted reactivity	dicots including: <i>Glycine max</i> , <i>Medicago truncatula</i> , <i>Nicotiana tabacum</i> , <i>Phaseolus vulgaris</i> , <i>Pisum sativum</i> , <i>Solanum lycopersicum</i> , <i>Solanum tuberosum</i> , <i>Spinacia oleracea</i> , <i>Vitis vinifera</i> , and monocots including: <i>Oryza sativa</i> , <i>Triticum aestivum</i> , <i>Zea mays</i> ; conifers, brown and red algae, cyanobacteria and diatoms
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	This antibody will detect the phosphorylated form of D1 as an alternate band to the main band on a high resolution gel.
selected references	<u>Malnoë</u> et al. (2014). Thylakoid FtsH Protease Contributes to Photosystem II and Cytochrome b6f Remodeling in <i>Chlamydomonas reinhardtii</i> under Stress Conditions. <i>Plant Cell</i> , Jan 21. <u>Sook Seok</u> et al. (2013). AtFKBP16-1, a chloroplast lumenal immunophilin,

mediates response to photosynthetic stress by regulating Psal stability.
Physiologia Plantarum, DOI: 10.1111/ppl.12116.

application example



5 µg of total protein extracted with **Protein Extraction Buffer**, PEB ([AS08 300](#)) from (1) *Arabidopsis thaliana* leaf, (2) *Hordeum vulgare* leaf, (3) *Chlamydomonas reinhardtii* total cell, (4) *Synechococcus* sp. 7942 total cell, were separated on **4-12% NuPage** (Invitrogen) **LDS-PAGE** and blotted 1h to **PVDF**. Blots were blocked immediately following transfer in 2% ECL Advance 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: 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% ECL Advance blocking solution for 1h at room temperature with agitation. The blots were washed as above and developed for 5 min with ECL Advance 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).