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Product no AS11 1786

Anti-PsbA | D1 protein of PSII, N-terminal

Product information

Immunogen	KLH-conjugated synthetic peptide derived from N-terminal of available plant, algal and cyanobacterial PsbA sequences, including *Arabidopsis thaliana* UniProt: A4QJR4, TAIR: AtCg00020 , *Oryza sativa* P0C434, *Populus alba* Q14FH6, *Physcomitrella patens* Q6YXN7, *Chlamydomonas reinhardtii* P07753, *Synechocystis* sp. P14660 and many others
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	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. This product can be sold containing ProClin if requested.

Application information

Recommended dilution	1 : 1000-1 : 10 000 (WB)
Expected | apparent MW	38 | 28-30 kDa
Confirmed reactivity	*Arabidopsis thaliana, Hordeum vulgare, Chlamydomonas reinhardtii, Chlorella vulgaris, Synechococcus* sp. PCC7942, sp. PCC7002, *Synechocystis* 6803 substrain PCC-M
Predicted reactivity	Algae (brown and red), Conifers, Cyanobacteria, *Brassica napus,* Diatoms*, Glycine max, Manihot esculenta, Medicago truncatula, Nicotiana tabacum, Oryza sativa, Phaseolus vulgaris, Pisum sativum, Solanum lycopersicum, Solanum tuberosum, Spinacia oleracea, Triticum aestivum, Zea mays, Vitis vinifera* Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known
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	Nagy et al. (2023). Photoautotrophic and sustained H2 production by the pgr5 mutant of Chlamydomonas reinhardtii in simulated daily light conditions. International Journal of Hydrogen Energy Volume 53, 31 January 2024, Pages 760-769. Chen et al. (2021)Degradation of the photosystem II core complex is independent of chlorophyll degradation mediated by Stay-Green Mg2+ dechelatase in Arabidopsis,Plant Science,Volume 307,2021,110902,ISSN 0168-9452,https://doi.org/10.1016/j.plantsci.2021.110902. Fukura et al. (2021) Enrichment of chlorophyll catabolic enzymes in grana margins and their cooperation in catabolic reactions. J Plant Physiol. 2021 Nov;266:153535. doi: 10.1016/j.jplph.2021.153535. Epub 2021 Sep 25. PMID: 34607178. Terentyev (2020: The Main Structural and Functional Characteristics of Photosystem-II-Enriched Membranes Isolated From Wild Type and cia3 Mutant Chlamydomonas reinhardtii. Life (Basel). 2020 May 14;10(5):E63. doi: 10.3390/life10050063.. Górecka et al. (2019). Photosystem II 22kDa protein level a prerequisite for excess light-inducible memory, cross-tolerance to UV-C, and regulation of electrical signalling. Plant Cell Environ. 2019 Nov 23. doi: 10.1111/pce.13686. Liu et al. (2018). Effects of PSII Manganese-Stabilizing Protein Succinylation on Photosynthesis in the Model Cyanobacterium Synechococcus sp. PCC 7002. Plant Cell Physiol. 2018 Jul 1;59(7):1466-1482. doi: 10.1093/pcp/pcy080.

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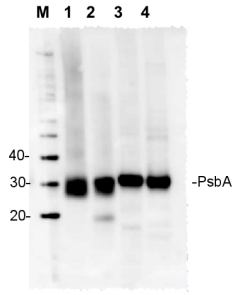
Application example



5 µg of total protein extracted with **P**rotein **E**xtration **B**uffer, 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).