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Product no AS06 146

PsbD | D2 protein of PSII

Product information

Background	D2 protein (**PsbD**) forms the reaction core of PSII (Photosystem II) as a heterodimer with the D1 protein (PsbA). PsbD is homologous to the D1 protein, with slightly higher molecular mass of about 39.5 kDa. Accumulation of D2 protein is an important step in the assemply of the PSII reaction centre complex.
Immunogen	KLH-comjugated synthetic peptide derived from the C-terminal of known PsbD sequences including *Arabidopsis thaliana* P56761, *Hordeum vulgare* P11849, *Chlamydomonas reinhardtii* P06007, *Synechococcus* sp. PCC 7002 P20898
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 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	AS09 146S | PsbD | D2 protein of PSII protein standard for western blot quantitation and as a positive control AS06 146PRE | PsbD | D2 protein of PSII, pre-immune serum, control for immunolocalization AS05 084 | Anti-PsbA (D1) protein of PSII, C-terminal, rabbit antibodies collection of antibodies to PSII proteins
Additional information	The peptide used to elicit this antibody has a perfect conservation across all full-length PsbD sequences from higher plants, lower plants, cyanobacteria and unicellular algae except: minor substitutions in some Prochlorococcus & Dinoflagellate sequences. The antibody should still work against these taxa, but it has not been tested yet. This antibody does not detect PsbA protein (D1). This product can be sold containing ProClin if requested.

Application information

Recommended dilution	1 : 5000 (WB)
Expected | apparent MW	39.4 | 28-30 kDa
Confirmed reactivity	*Arabidopsis thaliana, Anabaena* 7120*, Ditylum brightwellii, Horderum vulgare, Chlamydomonas reinhardtii, Chromochloris zofingiensis, Emiliania huxleyi, Lotus corniculatus, Nicotiana tabacum, Oryza sativa,* picocyanobacteria*, Pisum sativum, Phaseolus vulgaris, Phaeodactylum tricornutum, Trifolium pratense, Skeletonema costatum (diatom), Sinapsis alba, Synechococcus* sp. PCC 7942, *Synechocystis* sp. PCC6803, *Thalassiosira guillardii, Thalassiosira pseudonana, Triticale, Ulva prolifera*
Predicted reactivity	*Aegilops tauschii, Brassica napus, Cannabis sativa, Capsicum annuum, Centrolepsis monogyna, Chromera velia, Fischerella sp., Glycine max, Glycine soja, Crocosphaera watsonii, Leiosporoceros dussii, Cucumis sativa, Manihot esculenta, Microcystis aeruginosa, Nannochloropsis, Panax ginseng, Petermannia cirrosa, Pinus thunbergii, Physcomitrella patens, Populus trichocarpa, Ricinus communis, Solanum tuberosum, Spinacia oleracea, Solanum lycopersicum. Triticum aestivum, Utricularia alpina, Vitis vinifera, Vitrella brassicaformis, Zea mays* Species of your interest not listed? Contact us
Not reactive in	No confirmed exceptions from predicted reactivity are currently known.

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Additional information

There is a confirmed cross-reaction with TLA1 protein in *Chlamydomonas reinhardtii*.

For samples with a very low PSII content theremight be detection problems independent of the antibody. PSII proteins can vary in level depending upon liquid culture conditions. When the cells are in a stationary phase PSII content can drop to a very low level.

For high resolution images, please visit the specific product page at www.agrisera.com

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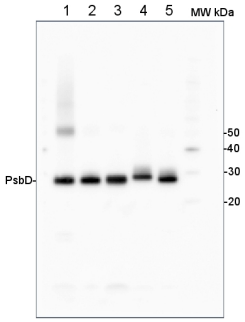
Application example



2 µg of total protein from (**1**) *Arabidopsis thaliana* leaf extracted with Agrisera **P**rotein **E**xtraction **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, (**5**) *Anabaena* sp. total cell 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: 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, recommended secondary antibody AS09 602) 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 chemiluminescence detection reagent of extreme femtogram sensitivity, 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 3 seconds.