

Product no **AS04 038**

PsbB | CP47 protein of PSII

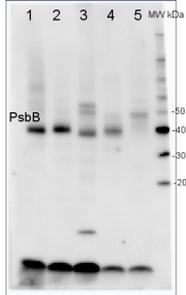
Product information

Immunogen	KLH-conjugated synthetic peptide derived from available plant, algal and cyanobacterial PsbB sequences including <i>Arabidopsis thaliana</i> AtCg00680 , <i>Hordeum vulgare</i> P10900 , <i>Oryza sativa</i> P0C364 , <i>Synechocystis</i> PCC 6803 P05429
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.
Additional information	This antibody can be used as a loading control for studies of PSII or photosynthetic acclimation in diatoms Blommaert et al. 2017 . <i>Limnol. Oceanogr.</i> DOI: 10.1002/lno.10511. This product can be sold containing ProClin if requested.

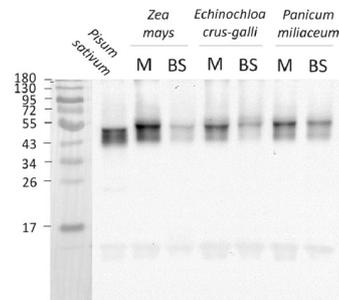
Application information

Recommended dilution	1 : 2000 (WB)
Expected apparent MW	56 kDa
Confirmed reactivity	<i>Anabaena</i> 7120, <i>Arabidopsis thaliana</i> , <i>Chlamydomonas reinhardtii</i> , <i>Echinochloa crus-galli</i> , <i>Hordeum vulgare</i> , <i>Malus prunifolia</i> , <i>Mesostigma viride</i> , <i>Opephora guenter-grassii</i> (diatom), <i>Oryza sativa</i> , <i>Panicum miliaceum</i> , <i>Phaseolus vulgaris</i> , <i>Physcomitrella patens</i> , <i>Pisum sativum</i> , <i>Skeletonema costatum</i> (diatom), <i>Synechococcus</i> PCC7942, 6803, , <i>Seminavis robusta</i> (diatom), <i>Zea mays</i>
Predicted reactivity	<i>Abies concolor</i> , <i>Brachypodium distachyon</i> , <i>Brassica napus</i> , <i>Cannabis sativa</i> , Cyanobacteria, <i>Cucumis sativus</i> , <i>Ephedra</i> sp., <i>Glycine max</i> , <i>Lotus japonicus</i> , <i>Manihot esculenta</i> , <i>Nanochloropsis</i> sp., <i>Nicotiana tabacum</i> , <i>Panax ginseng</i> , <i>Populus trichocarpa</i> , <i>Species of your interest not listed?</i> Contact us <i>Solanum tuberosum</i> , <i>Sorghum bicolor</i> , <i>Spinacia oleracea</i> , <i>Triticum aestivum</i> , <i>Vitis vinifera</i>
Not reactive in	No confirmed exceptions from predicted reactivity are currently known.
Additional information	This product can be sold containing ProClin if requested in bis-tris gel systems PsbB protein migrates between 40-45 kDa For high resolution images, please visit the specific product page at www.agrisera.com
Selected references	Cecchin et al (2021) LPA2 protein is involved in photosystem II assembly in <i>Chlamydomonas reinhardtii</i> . <i>Plant J.</i> 2021 Jul 4. doi: 10.1111/tpj.15405. Epub ahead of print. PMID: 34218480. Li et al. (2021) . Physiological responses of <i>Skeletonema costatum</i> to the interactions of seawater acidification and the combination of photoperiod and temperature. <i>Biogeosciences</i> , 18, 1439–1449, 2021 https://doi.org/10.5194/bg-18-1439-2021 Kamea et al. (2021) . Substitution of deoxycholate with the amphiphilic polymer amphipol A8-35 improves the stability of large protein complexes during native electrophoresis. <i>Plant Cell Physiol.</i> 2021 Jan 5:pcaa165. doi: 10.1093/pcp/pcaa165. Epub ahead of print. PMID: 33399873. Aso et al. (2021) . Unique peripheral antennas in the photosystems of the streptophyte alga <i>Mesostigma viride</i> . <i>Plant Cell Physiol.</i> 2021 Jan 8:pcaa172. doi: 10.1093/pcp/pcaa172. Epub ahead of print. PMID: 33416834. Trinugroho et al. (2020) . Chlorophyll F Synthesis by a Super-Rogue Photosystem II Complex. <i>Nat Plants</i> , 6 (3), 238-244

Application example



2 µg of total protein from *Arabidopsis thaliana* leaf (1), *Hordeum vulgare* (2), *Chlamydomonas reinhardtii* total cell (3) *Synechococcus* sp. 7942 total cell (4), *Anabaena* sp. total cell (5), 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 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 according to the manufacturers instructions. Images of the blots were obtained using a CCD imager (FluorSMax, Bio-Rad) and Quantity One software (Bio-Rad).



2.0 µg of chlorophyll from *Pisum sativum* chloroplasts and from *Zea mays*, *Echinochloa crus-galli*, *Panicum miliaceum* mesophyll and bundle sheath chloroplasts extracted with 0.4 M sorbitol, 50 mM Hepes NaOH, pH 7.8, 10 mM NaCl, 5 mM MgCl₂ and 2 mM EDTA. Samples were denatured with Laemmli buffer at 75 °C for 5 min and were separated on 12% SDS-PAGE and blotted 30 min to PVDF using wet transfer. Blot was blocked with 5% milk in TBS for 2h at room temperature (RT) with agitation. Blot was incubated in the primary antibody AS04_038 at a dilution of 1: 2000 overnight at 4 °C with agitation in 1% milk in TBS-T. The antibody solution was decanted and the blot was washed 4 times for 5 min in TBS-T at RT with agitation. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, from Agrisera, [AS09_602](#)) diluted to 1:25 000 in 1% milk in TBS-T for 1h at RT with agitation. The blot was washed 5 times for 5 min in TBS-T and 2 times for 5 min in TBS, and developed for 1 min with 1.25 mM luminol, 0.198 mM coumaric acid and 0.009% H₂O₂ in 0.1 M Tris- HCl, pH 8.5. Exposure time in ChemiDoc System was 122 seconds.

Courtesy Dr. Wioleta Wasilewska-Dębowska, Warsaw University, Poland