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product AS04 038

PsbB | CP47 protein of PSII

product information

background	**PsbB** (CP47) is a chlorophyll-binding protein located in the membrane, where it serves as the core antenna of Photosystem II.
immunogen	KLH-conjugated synthetic peptide derived from available plant, algal and cyanobacterial PsbB sequences including *Arabidopsis thaliana* AtCg00680
antibody format	rabbit polyclonal serum, lyophilized
quantity	50 µl 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)
additional information	to be added when available

application information

recommended dilution	1: 2000 (WB)
expected | apparent MW	56 kDa
confirmed reactivity	*Arabidopsis thaliana, Hordeum vulgare, Chlamydomonas reinhardtii*, *Synechococcus* PCC7942, *Anabaena* 7120
predicted reactivity	dicots including *Pisum sativum, Glycine* max and monocots inluding *Oryza sativa*, conifers,mosses,algae, cyanobacteria
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	in bis-tris gel systems PsbB protein migrates between 40-45 kDa
selected references	MacKenzie et al. (2003). Large reallocations of carbon, nitrogen,and photosynthetic reductant among phycobilisomes,photosystems, and Rubisco during light acclimation in Synechoccocus elongatus strain PCC7942 are constrained in cells under low environmental inorganic carbon. Arch Microbiol.183:190-202. Kusaba et al (2007). Rice non-yellow coloring1 is involved in light-harvesting complex II and grana degradation during leaf senescence. The Plant Cell 19:1362-1375.

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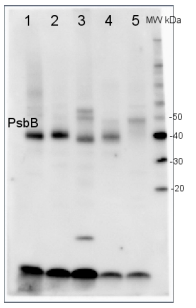
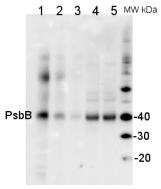
application example



2 µg of total protein from (**1**) *Arabidopsis thaliana* leaf extracted with PEB (**AS08 300**), (**2**) *Horderum vulgare* leaf extracted with PEB (**AS08 300**), (**3**) *Chlamydomonas reinhardtii* total cell extracted with PEB (**AS08 300**), (**4**) *Synechococcus* sp. 7942 total cell extracted with PEB (**AS08 300**), (**5**) *Anabaena* sp. total cell extracted with PEB (**AS08 300**) 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: 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, from Abcam) diluted to 1:50 000 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).

application example



0.2 µg of chlorophyll from (**4,5**) *Arabidopsis thaliana* leaf extracted with PEB (**AS08 300**), (**1**) 500 fmol of PsbB protein standard, (**2**) 200 fmol of PsbB protein standard, (**3**) 75 fmol of PsbB protein standard 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: 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, from Abcam) diluted to 1:50 000 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).