

product **AS05 092**

PsbO | 33 kDa of the oxygen evolving complex (OEC) of PSII

product information

background	The PsbO protein is an extrinsic subunit of the water splitting photosystem II (PSII) complex. The protein is exposed on the luminal side of the thylakoid membrane, and is highly conserved in all known oxygenic photosynthetic organisms. Alternative names of PsbO1 include 33 kDa subunit of oxygen evolving system of photosystem II, OEC 33 kDa subunit, 33 kDa thylakoid membrane protein, manganese-stabilizing protein 1 and for PsbO2 33 kDa subunit of oxygen evolving system of photosystem II, OEC 33 kDa subunit, 33 kDa thylakoid membrane protein, manganese-stabilizing protein 2.
immunogen	N-terminally located peptide chosen from <i>Arabidopsis thaliana</i> PsbO1 At5g66570 and 2 proteins At3g50820
antibody format	rabbit polyclonal serum, lyophilized
quantity	100 µl, for reconstitution add 100 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) immunohistochemistry (IHC) immunoprecipitation (IP)
additional information	loading based on 50-100 ng of chlorophyll is enough to obtain good signal with this antibody

application information

recommended dilution	1: 1000 with standard ECL (WB)
expected apparent MW	33 kDa
confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Hordeum vulgare</i>
predicted reactivity	dicots including <i>Brassica oleracea</i> , <i>Pisum sativum</i> , <i>Vitis vinifera</i> , and monocots including <i>Zea mays</i> , trees: <i>Populus tremula</i> , <i>Picea sitchensis</i>
not reactive in	<i>Chlamydomonas reinhardtii</i> , <i>Synechococcus</i> sp. PCC 7942
additional information	to be added when available
selected references	Ostersetzer et al (2007). Multiple intracellular locations of Lon protease in Arabidopsis: evidence for the localization of AtLon4 to chloroplasts. <i>Plant Cell Physiol.</i> 6: 881-885.

application example

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

