

product **AS06 119**

Cyt f | cytochrome f protein (PetA) of thylakoid Cyt b6/f-complex

product information

background	Multi-subunit complex of cytb6/f is a crucial component for the photosynthetic electron transport chain of higher plants, green algae and cyanobacteria. This complex is catalyzing oxidation of quinols and the reduction the reduction of plastocyanin. This reaction allows to establish the proton force required for the ATP synthesis. Four major subunits build the complex: the petA gene product corresponding to a c-type cytochrome (cytf), the petB gene product corresponding to a b-type/c'-type cytochrome with three haems (cyt b6), the petD gene product (subunit IV, or suIV), and the petC gene product, corresponding to the Rieske/Iron/sulfur protein.
immunogen	GST fusion to cytochrome f from <i>Chlamydomonas reinhardtii</i> P23577
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	contains 0.02 % sodium azide as preservative

application information

recommended dilution	1:2000 with alkaline phosphatase, 1: 50 000 with ECL (WB)
expected apparent MW	34 31-32 kDa
confirmed reactivity	<i>Arabidopsis thaliana</i> , <i>Hordeum vulgare</i> , <i>Physcomitrella patens</i> , <i>Chlamydomonas reinhardtii</i>
predicted reactivity	green algae
not reactive in	no confirmed exceptions from predicted reactivity known in the moment
additional information	reaction with cyanobacteria: <i>Synechocystis</i> 6803 and <i>Synechococcus</i> 7942 possible to obtain on total cell extract when using antibody at 1: 500 and longer exposure time.
selected references	Lecier et al. (2011). Functional analysis of hydrogen photoproduction in respiratory-deficient mutants of <i>Chlamydomonas reinhardtii</i> . International Journal of Hydrogen Energy

Lang, E.G.E., S.J. Mueller, S.N.W. Hoernstein, J. Porankiewicz-Asplund, M. Vervliet-Scheebaum, R. Reski (2010). Simultaneous isolation of pure and intact chloroplasts and mitochondria from moss as basis for sub-cellular proteomics. Plant Cell Reports, DOI: 10.1007/s00299-010-0935-4. (open source)

Page et al. (2004): A Homolog of Prokaryotic Thiol Disulfide Transporter CcdA Is Required for the Assembly of the Cytochrome b6f Complex in Arabidopsis Chloroplasts. J. Biol. Chem., Vol. 279, 32474-32482

application example

Chlamydomonas reinhardtii samples are lysed cells, *Arabidopsis thaliana* samples are prepared from thylakoid membranes; Samples were boiled 1 min in 3%SDS, then 10ug of chlorophylls were loaded in each well of a 12% acrylamide gel.

