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Product no AS06 119 Anti-Cyt f | Cytochrome f protein (PetA) of thylakoid Cyt b6/f-complex (algal) Product information

Immunogen	GST fusion to cytochrome f from Chlamydomonas reinhartii P23577
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 the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.
Additional information	Contains 0.02 % sodium azide as preservative
Application information	
Recommended dilution	1 : 2000-1 : 50 000 (WB)
Expected apparent MW	34 31-32 kDa
Confirmed reactivity	Arabidopsis thaliana, Chlamydomonas reinhardtii, Chlorella vulgaris, Colobanthus quitensis Kunt Bartl, CRaterostigma pumilum, Hordeum vulgare, Nannochloropsis gaditana, Nicotiana tabacum, Nostoc sp. PCC7120, Physcomitrium patens, Selaginella martensi, Synechocystis sp. 6803 substrain PCC-M, Ulva prolifera
Predicted reactivity	Algae, <i>Citrus x limon</i> , <i>Zea mays</i> Species of your interest not listed? <u>Contact us</u>
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	Redekop et al. (2020). PsbS Contributes to Photoprotection in Chlamydomonas Reinhardtii Independently of Energy Dissipation . Biochim Biophys Acta Bioenerg . 2020 Jun 1;1861(5-6):148183.doi: 10.1016 Liu et al. (2020). Acid treatment combined with high light leads to increased removal efficiency of Ulva prolifera. Algal Research, Volume 45, January 2020, 101745 Storfij et al. (2020). The activity of chloroplast NADH dehydrogenase-like complex influences the photosynthetic activity of the moss Physcomitrella patens. doi.org/10.1101/2020.01.29.924597 Koh et al. (2019). Heterologous synthesis of chlorophyllÄ?Å bÄ?Å inÅ?Å Nannochloropsis salinaÄ?Å enhances growth and lipid production by increasing photosynthetic efficiency. Biotechnol Biofuels.Ä?Å 2019 May 14;12:122. doi: 10.1186/s13068-019-1462-3. eCollection 2019. Dall'Osto et al. (2019). Combined resistance to oxidative stress and reduced antenna size enhance light-to-biomass conversion efficiency in Chlorella vulgaris cultures.Biotechnol Biofuels. 2019 Sep 16;12:221. doi: 10.1186/s13068-019-1566-9. Eristedit et al. (2015). The thylakoid membrane protein CGL160 supports CF1CF0 ATP synthase accumulation in Arabidopsis thaliana. PLoS One. 2015 Apr 2:10(4):e0121658. doi: 10.1371/journal.pone.0121658. Storti et al. (2018). Role of cyclic and pseudo-cyclic electron transport in response to dynamic light changes in Physcomitrella patens. Plant Cell Environ. 2018 Nov 29. doi: 10.1111/pce.13493. Kong et al. (2018) Interoganelle Communication: Peroxisomal MALATE DEHYDROGENASE2 Connects Lipid Catabolism to Photosynthesis through Redox Coupling in Chlamydomonas. Plant Cell. 2018 Aug;30(8):1824-1847. doi: 10.11016/pc.18.0031



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Suorsa et al. (2015). Light acclimation involves dynamic re-organisation of the pigment-protein megacomplexes in non-appressed thylakoid domains. Plant J. 2015 Aug 29. doi: 10.1111/tpj.13004.

<u>Charuvi</u> et al. (2015). Photoprotection Conferred by Changes in Photosynthetic Protein Levels and Organization during Dehydration of a Homoiochlorophyllous Resurrection Plant. Plant Physiol. 2015 Apr;167(4):1554-65. doi: 10.1104/pp.114.255794.

Hojka et al. (2014). Inducible repression of nuclear-encoded subunits of the cytochrome b6f complex in tobacco reveals an extraordinarily long lifetime of the complex. Plant Physiol. 2014 Jun 24. pii: pp.114.243741.

Dang et al. (2014). Combined Increases in Mitochondrial Cooperation and Oxygen Photoreduction Compensate for Deficiency in Cyclic Electron Flow in Chlamydomonas reinhardtii. Plant Cell. 2014 Jul 2. pii: tpc.114.126375. Lang et al. (2011).Simultaneous isolation of pure and intact chloroplasts and mitochondria from moss as the basis for sub-cellular proteomics. Plant Cell Rep. 2011 Feb;30(2):205-15.doi: 10.1007/s00299-010-0935-4.

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.



15 µg protein of whole cell extracts precipitated with 80 % acetone followed by re-suspension in 100 mM Tris HCl pH 6.8, 4 % SDS, 20 mM EDTA of *Chlamydomonas reinhardtii* were loaded on BioRad 4-20% Criterion TGX Precast Mini protein gels. Gels were run at 85V. For electro-blotting wet transfer onto nitrocellulose membrane was performed (105 V for 1h). Overnight blocking with 5% milk in TBS-T in the cold room. Two-hour-long incubation with anti-cyt f antibodies at a dilution of 1:50 000 in TBS-T was followed by washes and incubation with matching anti-rabbit secondary antibodies and development with chemiluminescent detection reagent following manufacture's recommendations. Image was taken using Chemidoc MP Imaging system. Exposure time was in a range of 3 to 10 seconds.

Courtesy of Dr. Angeliki Tsichla, Petroutsos lab, CEA Grenoble, France