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Product no AS15 2909

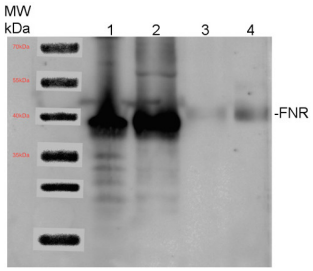
Anti-FNR | Ferredoxin-NADP+-oxidoreductase

Product information

Immunogen	Purified, native FNR from *Chlamydomonas reinhardtii,* UniProt: A8J6Y8
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	*Arabidopsis* has four FNR proteins, two of them are found in leaves (LFNR1 and LFNR2) while the other two in roots (RFNR1 and RFNR2). Absence of one of leaf FNR results in a decrease in the amount of FNR while absence of both of them is lethal.

Application information

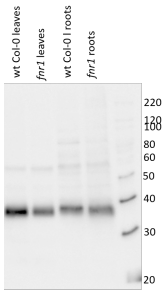
Recommended dilution	1 : 1000-1 : 3000 (WB)
Expected | apparent MW	35 kDa
Confirmed reactivity	*Arabidopsis thaliana, Chlamydomonas reinhardtii, Chlorella sorokiniana, Synechococcus sp.* PCC 6803
Predicted reactivity	*Catalpa bungei, Coccomyxa subellipsoidea* (strain C-169), *Gonium pectorale, Monoraphidium neglectum, Noccaea caerulescens, Ostreococcus lucimarinus* (strain CCE9901), *Volvox carteri* Species of your interest not listed? Contact us
Not reactive in	*Oryza sativa, Spinacia oleracea, Zea mays*
Additional information	For detection in *Chlorella sorokiniana, Synechococcus* PCC 6803 higher load per well needs to be applied. This antibody recognizes all *Arabidopsis thaliana* FNR isoforms. This product can be sold with ProClin if requested
Selected references	Tiwari et al. (2024).Differential FeS cluster photodamage plays a critical role in regulating excess electron flow through photosystem I. Nat Plants. 2024 Oct;10(10):1592-1603. doi: 10.1038/s41477-024-01780-2. Liu et al.(2024). Interactome Analysis of ClpX Reveals Its Regulatory Role in Metabolism and Photosynthesis in Cyanobacteria. J Proteome Res. 2024 Apr 5;23(4):1174-1187. doi: 10.1021/acs.jproteome.3c00610. Zhang et al. (2020). Enhanced Relative Electron Transport Rate Contributes To Increased Photosynthetic Capacity In Autotetraploid Pak Choi. Plant Cell Physiol. 2020 Jan 6. pii: pcz238. doi: 10.1093/pcp/pcz238.



10 ng of recombinant *Chlamydomonas reinhardtii* FNR **(1)**, thylakoid preparation (1 µg chl) from *Chlamydomonas reinhardtii* cc 124 **(2)**, thylakoid preparation (1 µg chl) of *Chlorella sorokiniana* **(3)**, thylakoid preparation (1 µg chl) of *Synechococcus* PCC 6803 **(4)** incubated with urea based sample buffer over night at 25°C were separated on Bolt 4-12 % Bis-Tris Plus gels (Novex, Life Tech) and blotted 1h to nitrocellulose using iBlot Gel Transfer Stacks Nitrocellulose, Mini (Novex, LifeTech). Blots were blocked with iBind (LifeTech) with iBind solution kit (Novex, LifeTech). Blot was incubated in the primary antibody at a dilution of 1: 1 000 for 1h at RT with agitation. There is no washing steps using this set up. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, from Agrisera, AS09 602) diluted to 1:40 000 in for 1h at RT

with agitation. The blot was washed as above and developed for with chemiluminescent detection reagent, according to manufacture recommendations. Exposure time was 10 min.

Courtesy of M.Sc. Pini Marcu, Tel Aviv University, Israel



Proteins were isolated from wt *Arabidopsis thaliana* and *fnr1* plants with 3X LB (6 M urea, 12% SDS, 30% glycerol, 100 mM DTT, 150 mM Tris pH7.0, 0.8% Comassie G-250). 10 µg of total proteins from leaves or roots were loaded into each lane and separated on 12% SDS-PAGE, and then blotted overnight onto PVDF membrane. Membranes were blocked with milk powder for 2 h and then incubated in the primary antibody solution overnight, which was then decanted and the membrane was washed 3 times for 5 min in TBST. Membrane was incubated at RT for 1 hour in 1:10 000 goat anti-Rabbit secondary antibody from Agrisera, followed by washing steps as above. Membrane was developed for 2 min with highest sensitivity chemiluminescent detection reagent according to the manufacturer's instructions and recorded using FujiFilm CCD camera with 10 s increment time for around 190 s.