

Anti- R-FNR (Root Ferredoxin-NADP reductase) antibody, rabbit polyclonal

81-007 100 µg

Shipping and Storage: Shipped at 4°C or -20°C and store at -20°C. Do not freeze.

Immunogen: Purified recombinant maize root-FNR protein (full-size, no-tag attached)

Form: 1 mg/ml in PBS⁻ with 50% glycerol. Filter sterilized. Azide and carrier free.

Purity: IgG, ProteinA-affinity purified from rabbit antiserum

Reactivity: Plant root FNR proteins (R-FNR1 and R-FNR2) including Arabidopsis and Maize. The antibody also reacts with leaf FNRs.

Applications:

1. Western blotting (1/1,000~1/30,000 dilution)
2. ELISA (assay dependent)

Other applications have not been tested.

Background: Ferredoxin-NADP reductase (FNR) isoproteins of plant roots play a key role in redox homeostasis of NADPH / NADP⁺ and donation of reducing equivalence to ferredoxin. R-FNR2 is major form of R-FNR and involved in reduction and detoxication of nitrite in root.

Data Link: UniProtKB: [Q41736](#) (*Z. mays*), [Q9M0V6](#) (*A. thaliana*)

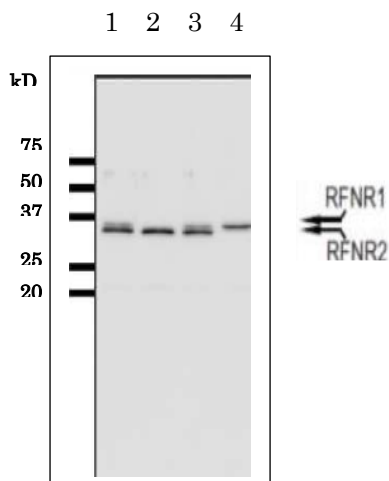


Fig.1 Detection of Arabidopsis R-FNR1 and R-FNR2 isoproteins by western blotting with anti-R-FNR antibody

Extracts from wild type strain Arabidopsis Col (1 and 3), mutant *rfer1* (2) and *rfnr2-2* (4) grown under 0.2 mM nitrate for 7 days were analyzed by western blotting. Anti-R-FNR antibody was used at 1/2,000 dilution. Note that R-FNR2 is dominant form in wild-type roots.

Wild type produces both R-FNR1 and R-FNR2.

Mutant *rfer1* produces R-FNR2 and mutant *rfnr2* produces R-FNR1.

Reference: This product has been used in the following publication.

1. Onda Y, et al. Differential interaction of maize root ferredoxin:NADP(+) oxidoreductase with photosynthetic and non-photosynthetic ferredoxin isoproteins. *Plant Physiol.* 2000, Jul;123(3):1037-45. PMID: [10889253](#) **WB; Maize**
2. Hachiya T et al. Arabidopsis Root-Type Ferredoxin:NADP(H) Oxidoreductase 2 is Involved in Detoxification of Nitrite in Roots. *Plant Cell Physiol.* 2016 Nov;57(11):2440-2450. PMID: [27615794](#) **WB; Arabidopsis**

