Anti-Fd-GOGAT (Ferredoxin-dependent glutamate synthase, chloroplastic) (Maise) antibody, rabbit polyclonal

Product code	81-025
Size	100 µg
Storage	-20℃
Concentration	2.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from rabbit antiserum.
Immunogen	Purified recombinant maize Fd-GOGAT protein, full-size, no-tag attached
Isotype	Rabbit IgG
Reactivity	Fd-GOGAT including those of maize, arabidopsis, spinach, and cyanobacterium (Synechococcus)
Special notes	N/A
Application	1. Western blotting (1/2,000-1/5,000 dilution) 2. ELISA (assay dependent) Other applications have not been tested.
Background	Glutamine oxoglutarate aminotransferase (abbreviated as GOGAT) is an enzyme involved in synthesis of glutamate from glutamine and alpha-ketoglutarate. GOGAT has two forms in plants: ferredoxin-dependent GOGAT (Fd-GOGAT) and NADH-dependent GOGAT (NADH-GOGAT). 95% of GOGAT found in plants is the Fd-GOGAT type. Fd-GOGAT is encoded by two genes, glu1 and glu2 in Arabidopsis. Fd-GOGAT (both forms) is highly conserved among plants, red algae, and cyanobacteria. Ferredoxin-dependent glutamate synthase, chloroplastic (Fd-GOGAT) is involved in glutamate biosynthesis in leaf. This protein required for the reassimilation of ammonium ions generated during photorespiration. Gene name is GlsF.
Data Link	UniProtKB: P23225 (Z. mays), Q51579 (P. boryanum), P55038 (*Synechocystis sp.)*

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Data Images: 81-025 Anti-Fd-GOGAT (Ferredoxin-dependent glutamate synthase, chloroplastic) (Maise) antibody, rabbit polyclonal

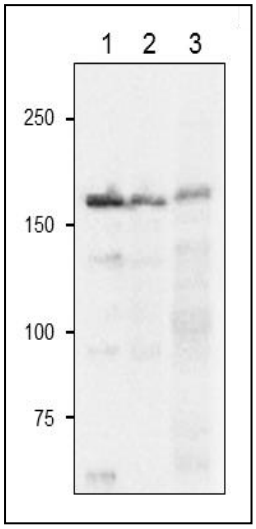

Fig.1 Western Blot of Fd-GOGAT in plant leaf extract.

1. Full-size recombinant maize Fd-GOGAT protein
2. Arabidopsis leaf extract, 10 µg
3. Maize leaf extract, 10 µg

Anti-Fd-GOGAT antibody was used at 1/2,500 dilution. Second antibody (goat anti-rabbit IgG antibody HRP-conjugated, ab97051) was used at 1/10,000 dilution.

Molecular masses of maize and arabidopsis Fd-GOGAT are 175 kDa and 168 kDa, respectively.

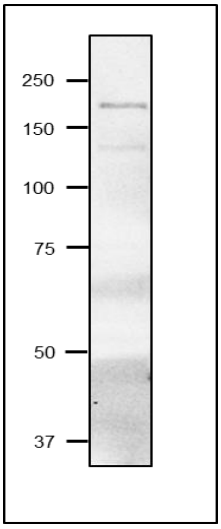

Fig.2 Western Blot of Fd-GOGAT in cyanobacterium

Sample: Crude extract of *Synechococcus* spp.6803

The Fd-GOGAT antibody was used at 1/2000 dilutions

Molecular mass is 169 kDa

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Reference: This antibody has been used in the following publications.

1. Sakakibara H. et al. Molecular cloning and characterization of complementary DNA encoding for ferredoxin-dependent glutamate synthase in maize leaf. J Biol Chem. 1991 Feb 5;266(4):2028-35. PMID: 1989968. **WB; maize**

2. Sakakibara H., Kawabata S., Hase T. and Sugiyama T. (1992) Differential effects of nitrate and light on the expression of glutamine synthetase and ferredoxin-dependent glutamate synthase in maize. Plant Cell Physiol., 33, 1193-1198. Googl Scholar:abstract/33/8/1193/1860644 **WB; maize**

3.Kimata-Ariga Y and Hase T. Multiple complexes of nitrogen assimilatory enzymes in spinach chloroplasts: possible mechanisms for the regulation of enzyme function. PLoS One. 2014 Oct 1;9(10):e108965. PMID: 25271437 **WB;spinach**

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