

## Anti-SiR (Sulfite Reductase, plant) antibody, rabbit polyclonal

Cat. # 81-033      Size: 200 µg

### Background:

Sulfite reductase (SiR) is an essential protein with sulfite reductase activity required in assimilatory sulfate reduction pathway during both primary and secondary metabolism and thus involved in development and growth. It is known as a DNA-binding protein that binds to both double-stranded and single-stranded DNA without significant sequence specificity to reversibly repress the transcriptional activity of chloroplast nucleoids by promoting DNA compaction and possibly regulate DNA replication. The sequence identity between maize and Arabidopsis SiR is 77% identical.

### Specifications:

**Storage:** Shipped at 4°C and store at -20°C

**Form:** 4 mg/ml in PBS, 50% glycerol. Filter sterilized. No preservative or carrier added.

**Purity:** IgG, affinity-purified with Protein A

**Immunogen:** Purified recombinant maize SiR protein (full size, no tag attached)

**Reactivity:** Plant SiR including those of maize, Arabidopsis, and pea

**Validation:** Specificity has been validated by Western Blot with recombinant full-size SiR protein.

### Applications

1. Western blot (1/1,000- 1/5,000 dilution)
2. ELISA (assay dependent)

Other applications have not been tested.

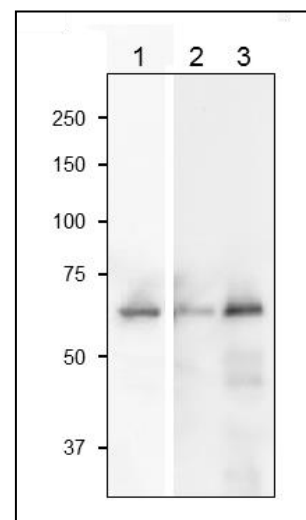
**Data Link:** ProtKB : [O23813](#) (SIR\_MAIZE), [Q9LZ66](#) (SIR\_ARATH)

### Fig. 1 Western Blot of SiR in plant leaf extract.

Anti-SiR antibody was used at 1/1,000 dilution. Secondary antibody (goat anti-rabbit IgG antibody HRP-conjugated, ab97051) was used at 1/10,000 dilution.

1. Recombinant maize SiR protein
2. Arabidopsis leaf extract, 10 µg
3. Maize leaf extract, 10 µg

Molecular mass of SiR is 72 kDa (Arabidopsis), 70 kDa (Maize).



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**References:** This product has been used in the following publication.

1. Yonekura-Sakakibara K, Onda Y, Ashikari T, Tanaka Y, Kusumi T, Hase T. "Analysis of reductant supply systems for ferredoxin-dependent sulfite reductase in photosynthetic and nonphotosynthetic organs of maize." *Plant Physiol.* 2000 Mar;122(3):887-94. PMID: [10712553](#) WB: Maize
2. Sato N, Nakayama M, Hase T. "The 70-kDa major DNA-compacting protein of the chloroplast nucleoid is sulfite reductase." *FEBS Lett.* 2001 Jan 5;487(3):347-50. PMID: [11163356](#) WB: Pea