Product: Anti-NtrC (Thioredoxine reductase)

Product no: AS06 159

Agrisera[®]

Antibodies for plant sciences

Product Information

Antibody clonality:	Polyclonal
Raised in:	Rabbit
Purity:	Affinity purified rabbit IgG in PBS pH 7.4
Quantity:	300 μg

Antibody form:Lyophilized. Forreconstitution please add 100 μl of sterile water.Please, remember to spin tubes briefly prior to opening them to
avoid any losses that might occur from liquid or lyophilized material
adhering to the cap or sides of the tubes.

Storage instructions: -20°C or -80°C long Term storage (years). Please, avoid freezing and thawing of antibodies. Make aliquots instead.

Application information:

Western Blot: 1: 500 with ECL

MW:

Reactivity: Antibody will react with long NtrC proteins and shorter NtrA-type rpoteins, which would be distinguished by migration size.

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Experimental conditions:

Cells were harvested by centrifugation and resuspended at 5 mg / mL protein in 7.5mM Na-phosphate pH 7.0, 20% glycerol and broken by 2 freeze / thaw cycles at -20°C.

Figure description: For immunoblot analysis, *Chlamydomonas* CC125 total proteins (40 ug / 0.5 cm) were separated on an SDS-containing polyacrylamide gel (10% monomer) and transferred onto PVDF (0.45um,

Millipore) for 1.5 h at room temperature at 400 mA in a semi-dry blotter in 25 mM Tris, 192 mM glycine, 0.01% SDS, 20% methanol. Membranes were blocked with 5% dry milk in TBS (10 mM TrisHCl, 150 mM NaCl, pH 7.5) + Tween-20 (0.05% w/v) for 1h. The membrane was incubated with anti-NtrC antibodies in dilution 1: 500 (lane 1) or 1: 1000 (lane 2) in TBS-T + 5% dry milk) overnight. Membrane was washed 3 x 10 min in TBS-T followed by incubation in a 1:5,000 dilution of GAR-HRP (Pierce) in TBS-T + 5% dry milk for 2.5 h. After washing for 2 x 10 min in TBS-T and 1 x 10 min in TBS the signal was detected with Supersignal West Pico Chemiluminescent Substrate (Pierce).

Antibodies are intended for the research use only not for diagnostic or therapeutic use.

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Background

Thioredoxin Reductase (TR, TrxR) is the only known enzyme (EC 1.8.1.9) which is reducing thoredoxin (Trx). Activity of thoredoxin is essential for growth and survival of the cell. There seem to be one isoform of NtrC protein in Arabidopsis which includes an N-terminal reductase domain and a C-terminal domain related to thioredoxin proteins. *Arabidopsis* and *Chlmydomonas* NtrC proteins are ca. 568 amino acids long, but include ca. 80 amino acid signal peptides, for mature protein size of ca. 488 amino acids.

Immunogen: Peptide target chosen from the Nterminal domain, nearly fully conserved within 3-4 NtrA-related proteins from *Arabidopsis* and with NtrC related proteins from *Chlamydomonas* sp. and *Synechococcus* sp. 7942 and other cyanobacteria.

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