# Data sheet

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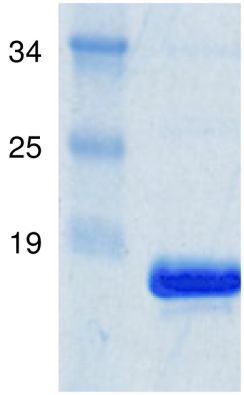
Jena Bioscience

## MSRB$^{His}$
## Methionine-R-Sulfoxide Reductase B, EC1.8.4.6
## recombinant, *E. coli*

| Cat. No. | Amount |
|---|---|
| PR-132 | 100 µg |




SDS-PAGE (12% gel) of 1 µg recombinantly expressed, NiNTA-purified MRGSH$_6$-EcMSRB.

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

**Avoid freeze / thaw cycles**

**Form**
Liquid. Supplied in 100 mM Tris-HCl pH 7.4 and 33% glycerol.

**Activity**
1 nmol of E. coli MSRB will reduce 0.6 nmol peptide-bound Met-R-sulfoxide in 1 min at 37°C.

**Molecular Weight**
16.8 kDa

**Purity**
>90% by SDS-PAGE

**Description**
MSRB is His-tagged at the N-terminal.
Like most bacteria, Escherichia coli expresses a single MSRB (Methionine-R-sulfoxide reductase, EC1.8.4.6; accession number NP416292) that carries out the reduction of methionine-R-sulfoxide to methionine. The *E. coli* enzyme – like the two human enzymes offered by Jena Bioscience - belong to a group of MsrBs, that possess a metal binding site composed of two CXXC motifs. The bound metal (zinc or iron) may stabilize the conformation of the enzymes.

**Activity assay**
MetO-containing peptides are reduced by the enzyme in the presence of DTT.

**Selected References:**

Ezraty *et al.* (2005) Methionine sulfoxide reductases in prokaryotes. *Biochim. Biophys. Acta* **1703**:221.
Olry *et al.* (2005) Insights into the role of the metal binding site in methionine-R-sulfoxide reductases B. *Protein Sci.* **14**:2828.
Etienne *et al.* (2003) A methionine sulfoxide reductase in Escherichia coli that reduces the R-enantiomer of methionine sulfoxide. *Biochem. Biophys. Res. Commun.* **300**:378.
Grimaud *et al.* (2001) Repair of oxidized proteins. Identification of a new methionine sulfoxide reductase. *J. Biol. Chem.* **276**:48915.
Schallreuter *et al.* (2007) Methionine Sulfoxide Reductases A and B Are Deactivated by Hydrogen Peroxide (H2O2) in the Epidermis of Patients with Vitiligo. *Journal of Investigative Dermatology* **128**:808-815.