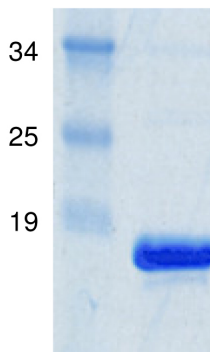


**MSRB^{His}**

Methionine-R-Sulfoxide Reductase B, EC1.8.4.6
E. coli, recombinant, *E. coli*

Cat. No.	Amount
PR-132	100 µg



SDS-PAGE (12% gel) of 1 µg recombinantly expressed, NiNTA-purified MRGSH₆-EcMSRB.

For in vitro use only!

Shipping: shipped on blue ice

Storage Conditions: store at -20 °C

Additional Storage Conditions: avoid freeze/thaw cycles

Shelf Life: 12 months

Molecular Weight: 16.8 kDa

Accession number: NP_416292

Purity: > 90 % (SDS-PAGE)

Form: liquid (Supplied in 100 mM Tris-HCl pH 7.4 and 33% glycerol)

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.

Activity:

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

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.