## **PRODUCT INFORMATION**

**Expression system** E.coli

**Domain** 24-235aa

**UniProt No.** Q9UJ68

NCBI Accession No. NP\_036463

Alternative Names methionine sulfoxide reductase A, bA235014.2, NRK1, RP11-235014.2

# **PRODUCT SPECIFICATION**

**Molecular Weight** 26.2 kDa (237aa) confirmed by MALDI-TOF

**Concentration** 0.5mg/ml (determined by Bradford assay)

**Formulation** Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 1mM DTT, 50mM NaCl

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

**Tag** His-Tag

Application SDS-PAGE

#### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

## Description

MSRA (methionine sulfoxide reductase A) belongs to the MsrA Met sulfoxide reductase family. This enzyme has an important function as a repair enzyme for proteins that have been inactivated by oxidation. It catalyzes the reversible oxidation-reduction of methionine sulfoxide in proteins to methionine. In enzymology, a MSRA is an enzyme that catalyzes the chemical reaction. The 3 substrates of this enzyme are peptide-L-methionine, thioredoxin disulfide, and H2O, whereas its two products are peptide-L-methionine (R) -S-oxide and thioredoxin. Recombinant human MSRA protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using



conventional chromatography techniques.

#### **Amino acid Sequence**

MGSSHHHHHH SSGLVPRGSH MGSHMGNSAS NIVSPQEALP GRKEQTPVAA KHHVNGNRTV EPFPEGTQMA VFGMGCFWGA ERKFWVLKGV YSTQVGFAGG YTSNPTYKEV CSEKTGHAEV VRVVYQPEHM SFEELLKVFW ENHDPTQGMR QGNDHGTQYR SAIYPTSAKQ MEAALSSKEN YQKVLSEHGF GPITTDIREG QTFYYAEDYH QQYLSKNPNG YCGLGGTGVS CPVGIKK

#### **General References**

Boschi-Muller S, et al. (2005) Biochim. Biophys. Acta. 1703 (2): 231-8. Hansel A., et al. (2005) Biochim. Biophys. Acta 1703:239-247.

## DATA



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.