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## Product Data Sheet

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Product Name: MSRA Human

Cat. No.: GP21956

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Mitochondrial peptide methionine sulfoxide reductase; Peptide-methionine (S)-S-oxide reductase; Peptide Met(O) reductase; Protein-methionine-S-oxide reductase; PMSR; MSRA.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGS HMGNSAS NIVSPQEALP GRKEQTPVAA KHHVNGNRTV EPFPEGTQMA VFGMGC FWGA ERKFWVLKGV YSTQVGFAGG YTSNPTYKEV CSEKTGHAEV VRVVYQPEHM SFEELLKVFV ENHDPTQGMR QGNDHGTQYR SAIYPTSAKQ MEAALSSKEN YQKVLSEHGF GPITTDIREG QTFYYAEDYH QQYLSKNPNG YCGLGGTGVS CPVGIKK.		
Formulation	MSRA protein solution (0.5mg/ml) is supplied in 20mM Tris-HCl buffer, pH8.0, 10% glycerol, 1mM DTT and 50mM NaCl.		

**Introduction**

Methionine sulfoxide reductase A (MSRA) is a member of the MsrA Met sulfoxide reductase family. The MSRA enzyme has a vital function as a repair enzyme for proteins which have been inactivated by oxidation. MSRA catalyzes the reversible oxidation-reduction of methionine sulfoxide in proteins to methionine. The three substrates of the MSRA enzyme are peptide-L-methionine, thioredoxin disulfide, and H<sub>2</sub>O, while its 2 products are peptide-L-methionine (R)-S-oxide and thioredoxin. The MSRA protein is ubiquitous and extremely conserved. Human and animal studies have shown the ultimate levels of expression in kidney and nervous tissue.

**Stability**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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### Background

MSRA Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 237 amino acids (24-235) and having a molecular mass of 26.2kDa. The MSRA is fused to a 24 amino acid His-Tag at N-terminus and purified by proprietary chromatographic techniques.

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