Recombinant human Selenoprotein R/MSRB1 protein

Catalog Number: ATGP0735

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-116aa

UniProt No.
Q9NZV6

NCBI Accession No.
NP_057416

Alternative Names
HSPC270, Methionine-R-sulfoxide reductase B1, MsrB1, Selenoprotein X, SELENOR, SELENOX, SelR, SelX, SepR, SEPX1

PRODUCT SPECIFICATION

Molecular Weight
14.8 kDa (136aa) confirmed by MALDI-TOF

Concentration
0.5mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 7.5) containing 1mM DTT, 0.1mM PMSF, 2mM EDTA, 10% glycerol

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
SEPX1, also known as Methionine sulfoxide reductase B1 (MSRB1), is a selenoprotein. Methionine sulfoxide reductases (MSRs) catalyze reduction of free and protein-bound methionine sulfoxides to corresponding methionines. The oxidation of methionine by ROS generates a diastereomeric mixture of methionine-S-sulfoxide (Met-S-SO) and methionine-R-sulfoxide (Met-R-SO). Two distinct enzyme families evolved for reduction of these sulfoxides, with methionine-S-sulfoxide reductase (MsrA) being stereospecific for Met-S-SO and methionine-R-

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sulfoxide reductase (MsrB) for Met-R-SO. In bacteria, the selenocystein (Sec/u) element is located immediately following the uGA codon within the reading frame for the selenoprotein so we mutated Sec-95 to Cys. Recombinant human SEPX1 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography.

Amino acid Sequence

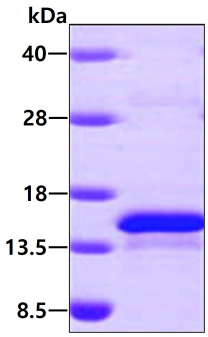
<MGSSHHHHHH SSGLVPRGSH> MSFCSFFGGE VFQNHFEPGV YVCAKCGYEL FSSRSKYAHS SPWPAFTETI HADSVAKRPE HNRSEALKVS CGKCGNGLGH EFLNDGPKPG QSRFCIFSSS LKFVPKGKET SASQGH

General References

Gladdyshev VN., et al. (2010) PLoS One. 5(7):e11497.
Thiele JJ., et al. (2009) Am J Dermatopathol. 31(5):427-31.

DATA

SDS-PAGE



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