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

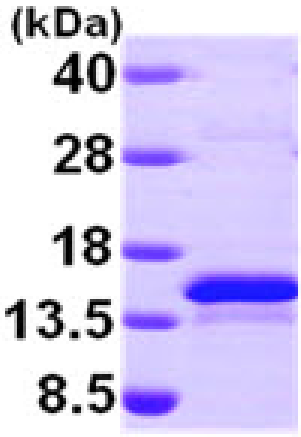
MGSSHHHHHH SSGLVPRGSH MSFCSFFGGE VFQNHFEPGV YVCAKCGYEL FSSRSKYAHS SPWPAFTETI HADSVAKRPE HNRSEALKVS CGKCGNGLGH EFLNDGPKPG QSRFCIFSSS LKFVPKGKET SASQGH

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



15% SDS-PAGE (3ug)

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