## PRODUCT INFORMATION

## Expression system

E.coli

## Domain

1-274aa
UniProt No.
014618
NCBI Accession No.
NP_005116

## Alternative Names

Copper chaperone for superoxide dismutase

## PRODUCT SPECIFICATION

## Molecular Weight

31.2 kDa (294aa) confirmed by MALDI-TOF

## Concentration

1mg/ml (determined by Bradford assay)

## Formulation

Liquid in. 20 mM Tris-HCl buffer (pH 8.0) containing $0.2 \mathrm{M} \mathrm{NaCl} 1 \mathrm{mM} \mathrm{DTT,10} \mathrm{\%} \mathrm{glycerol}$

## Purity

> 90\% by SDS-PAGE

## Tag

His-Tag

## Application

SDS-PAGE

## Storage Condition

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

## BACKGROUND

## Description

CCS is essential for the incorporation of copper into SOD-1, and therefore is necessary for its enzymatic activity. CCS prevents copper ions from binding to intracellular copper scavengers and provides the SOD-1 enzyme with the necessary copper cofactor. CCS escorts copper only to SOD-1 and fails to deliver copper to proteins in the mitochondria, nucleus or secretory pathway. While many tissues express CCS, the chaperone is most abundant in the kidney, liver and Purkinje cells in the neuropil of the central nervous system. Recombinant human CCS 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> MASDSGNQGT LCTLEFAVQM TCQSCVDAVR KSLQGVAGVQ DVEVHLEDQM VLVHTTLPSQ EVQALLEGTG RQAVLKGMGS GQLQNLGAAV AILGGPGTVQ GVVRFLQLTP ERCLIEGTID GLEPGLHGLH VHQYGDLTNN CNSCGNHFNP DGASHGGPQD SDRHRGDLGN VRADADGRAI FRMEDEQLKV WDVIGRSLII DEGEDDLGRG GHPLSKITGN SGERLACGII ARSAGLFQNP KQICSCDGLT IWEERGRPIA GKGRKESAQP PAHL

## General References

Romerius P., et al. (2010) Clin Cancer Res. 16(15):3843-50.
Seetharaman SV., et al. (2010) Biochemistry. 49(27):5714-25.

## DATA

## SDS-PAGE



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

