SANTA CRUZ BIOTECHNOLOGY, INC.

CCS (1-274): sc-4487 WB

The Power to Question

BACKGROUND

Cu/Zn Superoxide Dismutase-1 (SOD-1) is a well characterized cytosolic scavenger of oxygen free radicals that requires copper and zinc binding to potentiate its enzymatic activity. Copper Chaperone for SOD-1 (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. CCS interacts with both wild-type and mutated forms of SOD-1 through CCS domains that are homologous in SOD-1. CCS exists as a homodimer that may form a heterodimer with SOD-1 during copper loading. 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. The gene for CCS maps to human chromosome 11q13.

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SOURCE

CCS (1-274) is expressed in *E. coli* as a 57 kDa tagged fusion protein corresponding to amino acids 1-274 of CCS of human origin.

PRODUCT

CCS (1-274) is purified from bacterial lysates (>98%) by column chromatoraphy; supplied as 10 µg protein in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

CCS (1-274) is suitable as a Western blotting control for sc-20141.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

For research use only, not for use in diagnostic procedures.