

Active Recombinant Human Sulfite oxidase Mo Centre Domain/SUOX

Cat. No. SUOX-191H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Sulfite oxidase comprises the recombinant molybdenum C-terminal domain of Homo sapiens, purified from a TP1000 Escherichia coli strain.

Species

Human

Source

E.coli

Description

Sulfite oxidase (EC 1.8.3.1) is a homodimeric protein localized in the intermembrane space of mitochondria of all eukaryotic organisms. Each subunit contains an N-terminal domain, with a heme cofactor, and a C-terminal domain, with a molybdopterin cofactor (MoVI). The enzyme catalyzes the oxidation of sulfite to sulfate, which takes place at the molybdenum centre, and is the final reaction in the oxidative degradation of the sulfur amino acids cysteine and methionine.

Sequence

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MGSSHHHHHSSGLVPRGSHMVAPT VETSDPYADDPVRHPALKVNSQRPFNAEPP
PELLTENYITPNPIFFTRNHL PVPNLDPD TYRLHVVGAPGGQSLSLDLDLHNFP RYE
ITVTLQCAGNRRSEMTQVKEVKGLEWRTGAISTARWAGARLCDVLAQAGHQLCETE
AHVCFEGLDSDPTGTAYGASIP LARAAMDPEAEVLLAYEMNGQPLPRDHGFVVRVV
VPGVVGARHV KWLGRVSVQPEESYSHWQRRDYKGFSPSVDWETVDFDSAPSIQE
LPVQSAITEPRDGETVESGEVTIKGYAWSGG GRAVIRVDVSLDGGLTWQVAKLDGE
EQRPRKAWAWRLWQLKAPVPAGQKELNIVCKAVDDGYNVQPDTVAPIWNLRGVLS
NAWHRVHVYVSP
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|----------------------------------|---|
| Unit definition | One unit of sulfiteoxidase activity is defined as the amount of enzyme required to oxidize 1.0µmol of sulfite to sulfate, per min, in a coupled assay where the hydrogenperoxide formed in the first reaction is reduced by an NADH-peroxidase in thepresence of NADH, at 25 °C and pH 8.5. |
| Purity | >95%, asdetermined by SDS-PAGE |
| Specific activity | 0.5 U/mg |
| Temperature and pHOptimum | The optimum pH andtemperature are 8.5 and 25 °C, respectively. |
| Storage | Sulfite oxidase should be stored at 4 °C and will remain stableup to 3 years if stored as specified. |

GENE INFORMATION

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|------------------------|--|
| Gene Name | SUOXsulfite oxidase [Homo sapiens] |
| Official Symbol | SUOX |
| Synonyms | sulfite oxidase; EC1.8.3.1; sulfite oxidase, mitochondrial; OTTHUMP00000158619 |
| Gene ID | 6821 |
| mRNA Refseq | NM_000456 |
| Protein Refseq | NP_000447 |
| MIM | 606887 |
| UniProt ID | P51687 |

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**Chromosome
Location**

12q13.2

Pathway

Sulfur metabolism, organism-specific biosystem; Sulfur metabolism, conserved biosystem; sulfite oxidation IV, conserved biosystem; superpathway of methionine degradation, conserved biosystem

Function

binding; electron carrier activity; heme binding; metal ion binding; molybdenum ion binding; molybdopterin cofactor binding; oxidoreductase activity; sulfite oxidase activity

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