

Recombinant Human Mn Superoxide Dismutase (SOD2)

ORDERING INFORMATION

Catalog nos.: 13003P-5 5ug
 13003P-25 25ug
 13003P-1000 1000ug

Formulation: Sterile-filtered solution in 20mM Tris-HCl, pH 8.0, 20% glycerol. Purified by standard chromatographic techniques.

BACKGROUND

SOD2 is part of the iron/manganese superoxide dismutase family. It encodes a mitochondrial protein that forms a homotetramer and binds one manganese ion per subunit. SOD2 binds to the superoxide byproducts of oxidative phosphorylation and converts them to hydrogen peroxide and diatomic oxygen. Mutations in SOD2 gene have been associated with idiopathic cardiomyopathy (IDC), premature aging, sporadic motor neuron disease, and cancer. SOD2 destroys radicals which are usually produced within the cells and which are toxic to biological systems.

DESCRIPTION

Recombinant Human Mn SOD2 produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 219 amino acids (aa 25-222) with a molecular weight of 24.4kDa. It has a His-tag at the N-terminus.

SPECIFICATION SUMMARY

Source: *Escherichia coli*

Purity: Greater than 95% as determined by SDS- PAGE.

Accession number: P04179.2

Amino acid sequence:

MGSSHHHHHH SSGLVPRGSH MKHSLPDLPY DYGALEPHIN AQIMQLHHSK HHAAYVNNLN
VTEEKYQEAL AKGDVTAQIA LQPALKFNGG GHINHSIFWT NLSPNGGGEP KGELLEAIKR
DFGSFDKFKE KLTAASVG VQ GSGWGWLGFN KERGH LQIAA CPNQDPLQGT TGLIPLLID
VWEHAYYLQY KNVRPDYLKA IWNVINWENV TERYMACKK.

BIOLOGICAL ACTIVITY

Specific activity is >1,200 units/mg in which one unit will inhibit the rate of reduction of cytochrome c by 50% in a coupled system using xanthine and xanthine oxidase at pH 7.8 at 25°C in a 1.5ml reaction volume.

STORAGE AND STABILITY

Store at 4°C if entire vial will be used within 2-4 weeks. Store at -20°C for longer periods of time. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage. Avoid multiple freeze-thaw cycles.

For in vitro investigational use only. Not intended for use in therapeutic or diagnostic procedures.