

32-4917: Recombinant Human Superoxide Dismutase

Alternative Name : Superoxide dismutase [Cu-Zn], EC 1.15.1.1, SOD1, SOD, ALS, ALS1, IPOA.

Description

Source : Escherichia Coli. Recombinant Human Cu/Zn Superoxide Dismutase produced in E.Coli is a homodimer, non-glycosylated polypeptide chain containing 2 x 154 amino acids and having a total molecular mass of 31,608 Dalton. The Cu/Zn SOD is purified by proprietary chromatographic techniques. Human Cu/Zn Superoxide Dismutase (SOD1) catalyzes the reaction between superoxide anions and hydrogen to yield molecular oxygen and hydrogen peroxide. The enzyme protects the cell against dangerous levels of superoxide. SOD1 binds copper and zinc ions and is 1 of 3 isozymes accountable for destroying free superoxide radicals in the body. The encoded protein neutralizes supercharged oxygen molecules, which can damage cells if their levels are not controlled. Mutations in SOD1 cause a form of familial amyotrophic lateral sclerosis.

Product Info

Amount :	100 µg
Purification :	Greater than 95.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Content :	Lyophilized from a 0.2µm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.
Storage condition :	Lyophilized SOD although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution SOD should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.
Amino Acid :	The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Thr-Lys-Ala-Val.

Application Note

It is recommended to reconstitute the lyophilized SOD in sterile 18MΩ·cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions. The potency per mg was tested by Pyrogalllic Acid method and was found to be more than 10,000 Units/mg.