

Recombinant Human Cu/Zn Superoxide Dismutase

#R00487

Size: 100 µg/500 µg

Stability & Storage

- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
 - 1 month, 2 to 8 °C under sterile conditions after reconstitution.
 - 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Superoxide dismutase catalyzes the reaction between superoxide anions and hydrogen to yield molecular oxygen and hydrogen peroxide. Cu/Zn superoxide dismutase also named as SOD1, is an enzyme encoded by the SOD1 gene in humans, located on chromosome 21. The SOD1 binds Cu and Zn ions and is one of three SODs responsible for destroying free superoxide radicals in the body. It has been shown to interact with CCS and Bcl-2. The malfunction of SOD1 may increase the risk of illnesses like age-related muscle mass loss (sarcopenia), early development of cataracts, macular degeneration, thymic involution, hepatocellular carcinoma, shortened lifespan, keratoconus and amyotrophic lateral sclerosis.

AA Sequence

ATKAVCVLKGDGPVQGIINFEQKESNGPVKVWGSIKG
LTEGLHGFHVHEFGDNTAGCTSAGPHFNPLSRKHGG

PKDEERHVGDLGNVTADKDGADVSIEDSVISLSGDH
CIIGRTLVVHEKADDLGKGGNEESTKTGNAGSRLACG
VIGIAQ

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	SOD1
Accession	P00441
GeneID	6647
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 31.6 kDa, a homodimer, non-glycosylated polypeptide chain containing 2 × 153 amino acids.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The potency per mg was determined by pyrogallol autoxidation method and was found to be more than 3000 U/mg.
Physical	Sterile Filtered White Lyophilized

Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/μg of rHuCu/Zn SOD as determined by LAL method.