

Product Data Sheet

Product Name: Catalase from bovine liver(2000-5000u/mg)

Cat. No.: GC64933

Chemical Properties

Cas. No. 9001-05-2

SMILES [Catalase]

Formula M.Wt

Solubility Water: 20 mg/mL ; DMSO: < 1 mg/mL (insoluble or slightly soluble) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Catalase

Background

Catalase is a key enzyme in the metabolism of H₂O₂ and reactive oxygen species (ROS), and its expression and localization is markedly altered in tumors[1]. Free oxygen radical scavenger.

Catalase, the enzyme that metabolizes H₂O₂ but also reacts with a multitude of other substrates. The active site of catalase contains an iron atom. Human catalase contains four identical subunits, each subunit containing four distinct domains and one prosthetic heme group. The four domains

Caution: Product has not been fully validated for medical applications. For research use only.

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include: (1) a N-terminal arm which contains a distal histidine, an essential amino acid for the catalase reaction; (2) a β -barrel domain that contains eight β -barrels arranged in an antiparallel fashion with six α -helical insertions, conferring the hydrophobic core of the protein necessary for the tri-dimensional structure of the enzyme; (3) a connection domain which contains the tyrosine residue that binds the heme group; and finally (4) an α -helical domains, which is important for NADPH binding[1].

References:

[1]. Glorieux C, et al. Catalase, a remarkable enzyme: targeting the oldest antioxidant enzyme to find a new cancer treatment approach. Biol Chem. 2017 Sep 26;398(10):1095-1108.

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