

Human CAT / Catalase Protein (His Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 12084-H07B

General Information

Gene Name Synonym:

CAT

Protein Construction:

A DNA sequence encoding the human CAT (P04040) (Ala 2-Leu 527) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 80 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human CAT consists of 545 amino acids and predicts a molecular mass of 61.9 kDa. It migrates as an approximately 60 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 10% gly

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

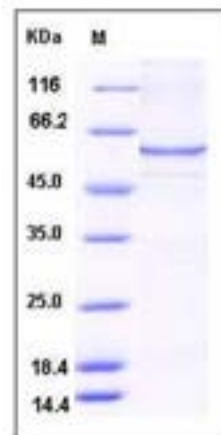
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Catalase is a ubiquitously expressed enzyme that catalyzes the decomposition of hydrogen peroxide to water and oxygen. It is a tetramer of four polypeptides chains containing four porphyrin heme groups that allow the enzyme to react with the hydrogen peroxide. The optimum PH of human catalase is approximately 7 and the optimum temperature is at 37 degree. Both the PH optimum and temperature for other catalases varies depending on the species. Catalase can be inhibited by a flux of O₂- generated in situ by the aerobic xanthine oxidase reaction. This inhibition of catalase by O₂- provides the basis for a synergism between superoxide dismutase and catalase. Such synergisms have been observed in vitro and may be significant in vivo. Catalase is used in the food industry for removing hydrogen peroxide from milk prior to cheese production. Another use is in food wrappers where it prevents food from oxidizing. Catalase is also used in the textile industry, removing hydrogen peroxide from fabrics to make sure the material is peroxide-free.

Manufactured By Sino Biological Inc., FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

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