Recombinant Human Catalase Protein, His Tag (active enzyme)

Catalog # CAE-H5143

Product Details

Catalase (CAT) is a key antioxidant enzyme that defends cells against oxidative stress. As a heme-containing enzyme naturally present in nearly all aerobic cells, it efficiently converts the reactive oxygen species hydrogen peroxide (H_2O_2) into water and oxygen, thereby mitigating the toxic effects of H_2O_2. This Recombinant Human Catalase Protein is fused with a His-tag at the N-terminus, expressed in *E. coli* and purified via conventional chromatography techniques.

Application

Scavenging and eliminating excess H_2O_2 in cell culture and biochemical reactions to reduce oxidative stress.
Removing residual H_2O_2 from samples in immunoassays (e.g., ELISA, Western Blot) to prevent background interference.
Antioxidant mechanism research and related studies on oxidative stress-related diseases.
Used as a standard control enzyme in antioxidant activity assays.
Applications in biological sample processing to prevent H_2O_2-induced damage.

Unit Definition

Specific activity is > 25,000 units/mg. One unit will decompose 1.0 μmole of H2O2 per minute at pH 7.0 at 25°C.

Purity

>85% as determined by SDS-PAGE.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Formulation

Supplied as 0.2 μm filtered solution in 50 mM Tris, 150 mM NaCl, pH8.0 with glycerol as protectant.

Contact us for customized product form or formulation.

Shipping

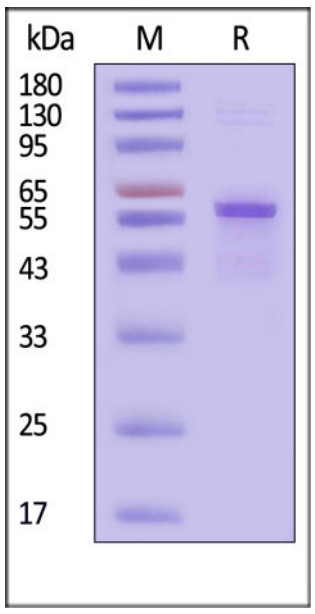
This product is supplied and shipped with dry ice, please inquire the shipping cost.

Storage

This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt.
- -70°C for 12 months under sterile conditions.

SDS-PAGE



The gel was stained with Coomassie Blue. The purity of the protein is greater than 85% (With Star Ribbon Pre-stained Protein Marker).

Bioactivity

Measured by its ability to hydrogen peroxide (H_2O_2) to produce water and oxygen. The specific activity is >25 umol/min/μg (QC tested).