

## Native Human Catalase

Cat. No. NATE-0108

Lot. No. (See product label)

### Introduction

#### Description

Catalase activates the decomposition of hydrogen peroxide, a reactive oxygen species, into water and oxygen. It functions as a natural antioxidant, protecting cells against oxidative damage to proteins, lipids and nucleic acids. Catalase has also been used to study the role reactive oxygen species play in gene expression and apoptosis.

#### Synonyms

EC 1.11.1.6; Catalase; catalase; equilase; caperase; optidase; catalase-peroxidase; CAT; H<sub>2</sub>O<sub>2</sub>:H<sub>2</sub>O<sub>2</sub> oxidoreductase; 9001-05-2

### Product Information

#### Species

Human

#### Source

Human erythrocytes

#### Form

buffered aqueous solution. Solution in 50 mM Tris, pH 8.0

#### EC Number

EC 1.11.1.6

#### CAS No.

9001-05-2

#### Molecular Weight

tetramer mol wt ~250 kDa

#### Purity

> 90% (SDS-PAGE)

#### Activity

> 30,000 units/mg protein

#### Pathway

Amyotrophic lateral sclerosis (ALS), organism-specific biosystem; Amyotrophic lateral sclerosis (ALS), conserved biosystem; Folate Metabolism, organism-specific biosystem; FoxO family signaling, organism-specific biosystem; Glyoxylate and dicarboxylate metabolism, organism-specific biosystem; Glyoxylate and dicarboxylate metabolism, conserved biosystem; Metabolic pathways, organism-specific biosystem

#### Function

NADP binding; aminoacylase activity; catalase activity; catalase activity; heme binding; metal ion binding; oxidoreductase activity, acting on peroxide as acceptor; protein homodimerization activity

#### Unit Definition

One unit will decompose 1.0  $\mu$ mole of H<sub>2</sub>O<sub>2</sub> per min at pH 7.0 at 25°C, while the H<sub>2</sub>O<sub>2</sub> conc. falls from 10.3 to 9.2 mM, measured by the rate of decrease of A<sub>240</sub>.

### Storage and Shipping Information

#### Storage

-20°C