

Native Human Catalase Protein

Cat. No. CAT-1646H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Native Human Catalase purified from Erythrocytes.
Species	Human
Source	Erythrocytes
Description	This gene encodes catalase, a key antioxidant enzyme in the bodies defense against oxidative stress. Catalase is a heme enzyme that is present in the peroxisome of nearly all aerobic cells. Catalase converts the reactive oxygen species hydrogen peroxide to water and oxygen and thereby mitigates the toxic effects of hydrogen peroxide. Oxidative stress is hypothesized to play a role in the development of many chronic or late-onset diseases such as diabetes, asthma, Alzheimer"s disease, systemic lupus erythematosus, rheumatoid arthritis, and cancers. Polymorphisms in this gene have been associated with decreases in catalase activity but, to date, acatalasemia is the only disease known to be caused by this gene.
Form	Homotetramer
Molecular Mass	230 kDa
Extinction Coefficient	1.39
Bio-Activity	Greater than 50,000 units per mg protein. One unit is equal to the amount of enzyme that will decompose one micromole of hydrogen peroxide per minute at 25

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	centigrade, pH 7.0
Purity	> =95% by SDS-PAGE
Stability	> 1 year
Storage	≤ -70 centigrade
Storage Buffer	Frozen in 50 mM Tris-HCl, pH 8.0.
Reference	1. Xiao, Wusheng, Yueming Zhu, Ehab H. Sarsour, Amanda L. Kalen, Nukhet Aykin-Burns, Douglas R. Spitz, and Prabhat C. Goswami. "Selenoprotein P regulates 1-(4-Chlorophenyl)-benzo-2, 5-quinone induced oxidative stress and toxicity in human keratinocytes." Free Radical Biology and Medicine (2013)

GENE INFORMATION

Gene Name	CAT catalase [Homo sapiens (human)]
Official Symbol	CAT
Synonyms	CAT; catalase; epididymis secretory sperm binding protein; EC 1.11.1.6
Gene ID	847
mRNA Refseq	NM_001752
Protein Refseq	NP_001743
MIM	115500

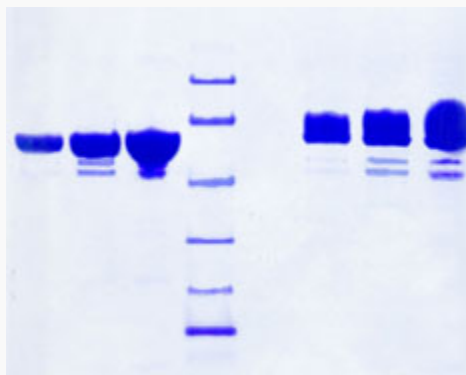
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UniProt ID P04040

SDS-PAGE



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