Native Human CAT

Cat. No. CAT-26409TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Full length native Human Catalase purified from Human Erythrocytes; amino acids 2-527, Homotetramer 244kDa.
Species	Human
ProteinLength	2-527 a.a.
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, Alzheimers 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.
Biological activity	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°C, pH 7.0
Form	Liquid
Purity	>95% by SDS-PAGE

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Storage buffer	Preservative: NoneConstituents: 50mM Tris HCl, pH 8.0
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequence Similarities	Belongs to the catalase family.
Full Length	Full L.

GENE INFORMATION

Gene Name	CAT catalase [Homo sapiens]
Official Symbol	CAT
Synonyms	CAT; catalase;
Gene ID	847
mRNA Refseq	NM_001752
Protein Refseq	NP_001743
MIM	115500
Uniprot ID	P04040
Chromosome Location	11p13
Pathway	Amyotrophic lateral sclerosis (ALS), organism-specific biosystem; Amyotrophic lateral

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	sclerosis (ALS), conserved biosystem; Folate Metabolism, organism-specific biosystem; FoxO family signaling, organism-specific biosystem; Metabolic pathways, organism-specific biosystem;
Function	NADP binding; catalase activity; catalase activity; heme binding; metal ion binding;

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