

## Native Human CAT

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

### SPECIFICATION

<b>Product Overview</b>	Full length native Human Catalase purified from Human Erythrocytes; amino acids 2-527, Homotetramer 244kDa.
<b>Species</b>	Human
<b>ProteinLength</b>	2-527 a.a.
<b>Description</b>	<p>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.</p>
<b>Biological activity</b>	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
<b>Form</b>	Liquid
<b>Purity</b>	>95% by SDS-PAGE

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<b>Storage buffer</b>	Preservative: None Constituents: 50mM Tris HCl, pH 8.0
<b>Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
<b>Sequence Similarities</b>	Belongs to the catalase family.
<b>Full Length</b>	Full L.
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	<a href="#">CAT catalase [ Homo sapiens ]</a>
<b>Official Symbol</b>	<a href="#">CAT</a>
<b>Synonyms</b>	CAT; catalase;
<b>Gene ID</b>	<a href="#">847</a>
<b>mRNA Refseq</b>	<a href="#">NM_001752</a>
<b>Protein Refseq</b>	<a href="#">NP_001743</a>
<b>MIM</b>	<a href="#">115500</a>
<b>Uniprot ID</b>	<a href="#">P04040</a>
<b>Chromosome Location</b>	11p13
<b>Pathway</b>	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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