

# Recombinant Human CAT Protein, Myc/DDK-tagged, C13 and N15-labeled

**Cat. No.** CAT-4608H    **Lot. No.** (See product label)

## SPECIFICATION

### Product Overview

CAT MS Standard C13 and N15-labeled recombinant protein (NP\_001743) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.

### Species

Human

### Source

HEK293

### 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.

### Molecular Mass

59.8 kDa

### AA Sequence

MADSRDPASDQMQRHWKEQRAAQKADVLTTGAGNPVGDKLNIVITVGPRGPLLVQD  
 VVFTDEMAHFDRERIPERVVHAKGAGAFGYFEVTHDITKYSKAKVFEHIGKKTPIAVR  
 FSTVAGESGSADTVRDPRGFAVKFYTEDGNWDLVGNNTPIFFIRDPILFPSFIHSQKR  
 NPQTHLKDPDMVWDFWLSLRPESLHQVSFLFSDRGIPDGHHRHMNGYGSHTFKLVNA

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NGEAVYCKFHYKTDQGKLNLSVEDAARLSQEDPDYGIRDLFNAIATGKYPSWTFYIQ  
 VMTFNQAETFPFNPFDLTKVWPHKDYPLIPVGKLVNLRNPVNYFAEVEQIAFDPSNM  
 PPGIEASPDKMLQGRLFAYPDTHRHLGPNYLHIPVNCPYRARVANYQRDGPMM  
 QDNQGGAPNYYPNSFGAPEQQPSALEHSIQYSGEVRRFNTANDDNVTQVRAFVYN  
 VLNEEQRKRLCENIAGHLKDAQIFIQKKAVKNFTEVHPDYGSHIQALLDKYNAEKPKN  
 AIHTFVQSGSHLAAREKANLTRTRPLEQKLISEEDLAANDILDYKDDDDKV

<b>Purity</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Stability</b>	Stable for 3 months from receipt of products under proper storage and handling conditions.
<b>Storage</b>	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
<b>Concentration</b>	50 µg/mL as determined by BCA
<b>Storage Buffer</b>	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

## GENE INFORMATION

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

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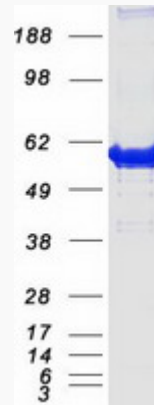
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MIM 115500

UniProt ID P04040

SDS-PAGE



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