

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	MADSRDPASDQMQRHWKEQRAAQKADVLTTGAGNPVGDKLNVITVGPRGPLLVQD VVFTDEMAHFDRERIPERVVHAKGAGAFGYFEVTHDITKYSKAKVFEHIGKKTPIAVR FSTVAGESGSADTVRDPGRFAVKFYTEDGNWDLVGNNTPIFFIRDPILFPSFIHSQKR NPQTHLKDPDMVWDFWSLRPESLHQVSFLFSDRGIPDGHHRHMNGYGSHTFKLVNA

 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

NGEAVYCKFHYKTDQGKLNLSVEDAARLSQEDPDYGIRDLFNAIATGKYPSWTFYIQ
 VMTFNQAETFPFNPFDLTKVWPHKDYPLIPVGKLVNLRNPVNYFAEVEQIAFDPSNM
 PPGIEASPDKMLQGRLFAYPDTHRRLGPNYLHIPVNCPYRARVANYQRDGPMM
 QDNQGGAPNYYPNSFGAPEQQPSALEHSIQYSGEVRRFNTANDDNVTQVRAFVYN
 VLNEEQRKRLCENIAGHLKDAQIFIQKKAVKNFTEVHPDYGSHIQALLDKYNAEKPKN
 AIHTFVQSGSHLAAREKANLTRTRPLEQKLISEEDLAANDILDYKDDDDKV

Purity > 80% as determined by SDS-PAGE and Coomassie blue staining

Stability Stable for 3 months from receipt of products under proper storage and handling conditions.

Storage Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

Concentration 50 µg/mL as determined by BCA

Storage Buffer 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name CAT catalase [Homo sapiens (human)]

Official Symbol CAT

Synonyms CAT; catalase; catalase; epididymis secretory sperm binding protein; EC 1.11.1.6

Gene ID 847

mRNA Refseq NM_001752

Protein Refseq NP_001743

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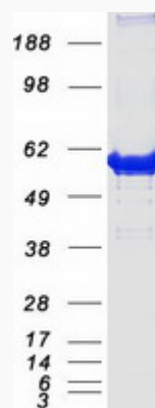
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MIM 115500

UniProt ID P04040

SDS-PAGE



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