

## Product datasheet for PH310763

### Catalase (CAT) (NM\_001752) Human Mass Spec Standard

#### Product data:

Product Type:	Mass Spec Standards
Description:	CAT MS Standard C13 and N15-labeled recombinant protein (NP_001743)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC210763
Predicted MW:	59.8 kDa
Protein Sequence:	>RC210763 protein sequence Red=Cloning site Green=Tags(s)

MADSRDPASDQMQHWEQRAAQKADVLTTGAGNPVGDKLNIVITVGPGRPLLVDVVFTEDEMAHFDRERIP  
ERVVHAKGAGAFGYFEVTHDITKYSKAKVFEHIGKKTPIAVRFSTVAGESGSADTVRDPGRFAVKFYTED  
GNWDLVGNNTPIFFIRDPILFSPFIHSQKRNPQTHLKDPDMVWDFWSLRPESLHQVSFLFSDRGIPDGH  
HMNGYGSHTFKLVNANGEAVYCKFHYKTDQGIKNSVEDAARLSQEDPDYGIRDLFNAIATGKYPSTWTFY  
IQVMTFNQAETFPFNPFDLTKVWPHKDYPLIPVGKLVNLRNPVNYFAEVEQIAFDPSNMPPGIEASPKM  
LQGRLEAYPDTHRRLGPNYLHIPVNCOPYRARVANYQRDGMCMQDNQGGAPNYYPNSFGAPEQQPSALE  
HSIQYSGEVRRFNTANDDNVTQVRAFVYVNLNEEQQRKLCENIAGHLKDAQIFIQKAVKNFTEVHPDYG  
SHIQALLDKYNAEKPKNAIHTFVQSGSHLAAREKANL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- 13C6, 15N4]-L-Arginine and [U- 13C6, 15N2]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<u>NP_001743</u>
RefSeq Size:	2300
RefSeq ORF:	1581



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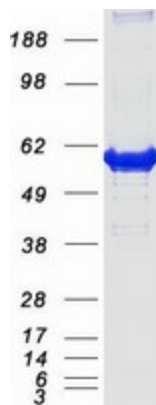
Locus ID: 847  
UniProt ID: [P04040](#), [A0A384P5Q0](#)  
Cytogenetics: 11p13

**Summary:** 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. [provided by RefSeq, Oct 2009]

**Protein Families:** Druggable Genome

**Protein Pathways:** Amyotrophic lateral sclerosis (ALS), Metabolic pathways, Methane metabolism, Tryptophan metabolism

### Product images:



Coomassie blue staining of purified CAT protein (Cat# [TP310763]). The protein was produced from HEK293T cells transfected with CAT cDNA clone (Cat# [RC210763]) using MegaTran 2.0 (Cat# [TT210002]).