

Recombinant human Catalase protein

Catalog Number: ATGP1624

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-527aa

UniProt No.

P04040

NCBI Accession No.

NP_001743

Alternative Names

CAT

PRODUCT SPECIFICATION

Molecular Weight

61.9 kDa (547aa)

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.15M NaCl, 10% glycerol

Purity

> 90% by SDS-PAGE

Biological Activity

Specific activity is > 100,000unit/mg. One unit will decompose 1.0umole of H₂O₂ per minute at pH 8.0 at 25C.

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

CAT is a key antioxidant enzyme in the body's defense against oxidative stress. Also, it is a heme enzyme that is present in the peroxisome of nearly all aerobic cells. CAT converts the reactive oxygen species hydrogen peroxide to water and oxygen and thereby mitigates the toxic effects of hydrogen peroxide. Recombinant human CAT protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional

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chromatography techniques.

Amino acid Sequence

<MGSSHHHHHH SSGLVPRGSH> MADSRDPASD QMQHWKEQRA AQKADVLTG AGNPVGDKLN VITVGPRGPL
LVQDVVFTDE MAHFDREIRIP ERVVHAKGAG AFGYFEVTHD ITKYSKAKVF EHIGKKTPIA VRFSTVAGES GSADTVRDPR
GFAVKFYTED GNWDLVGNNT PIFFIRDPII FPSFIHSQKR NPQTHLKDPD MVWDFWSLRP ESLHQVSFLF SDRGIPDGHR
HMNGYGSHTF KLVNANGEAV YCKFHYKTDQ GIKNLSVEDA ARLSQEDPDY GIRDLFNAIA TGKYPSTWTFY IQVMTFNQAE
TFPFNPFDLT KVWPHKDYPL IPVGKLVLR NPVNYFAEVE QIAFDPSNMP PGIEASPDKM LQGRLFAYPD THRHRLGPNY
LHIPVNCYPY ARVANYQRDG PMCMQDNQGG APNYYPNSFG APEQQPSALE HSIQYSGEVR RFNTANDDNV TQVRAFVNV
LNEEQRKRLC ENIAGHLKDA QIFIQKKAVK NFTEVHPDYG SHIQALLDKY NAEKPKNAIH TFVQSGSHLA AREKANL

General References

Freitas MO, et al. (2011) J Biol Chem. 2011 Nov 25
286(47):40509-19. Epub 2011 Oct 5.

DATA

SDS-PAGE

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

