

## CAT Human

**Description:** CAT Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 547 amino acids (1-527) and having a molecular mass of 61.9kDa. CAT is fused to a 20 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

**Catalog #:** ENPS-636

For research use only.

**Synonyms:** Catalase, CAT.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MADSRDPASD QMQHWKEQRA  
AQKADVLTTG AGNPVGDKLN VITVGPRGPL LVQDVVFTDE MAHFDREIRIP ERVVHAKGAG  
AFGYFEVTHD ITKYSKAKVF EHIGKKTPIA VRFSTVAGES GSADTVRDPR GFAVKFYTED  
GNWDLVGNNT PIFFIRDPII FPSFIHSQKR NPQTHLKDPD MVWDFWLSLRP ESLHQVSFLF  
SDRGIPDGHR HM

**Purity:** Greater than 90.0% as determined by SDS-PAGE.

### Formulation:

The CAT solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.15M NaCl and 10% glycerol.

### Stability:

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

Catalase (CAT) is a key antioxidant enzyme in the body's defense against oxidative stress. Furthermore, Catalase is a heme enzyme which is present in the peroxisome of virtually all aerobic cells. Catalase converts the reactive oxygen species hydrogen peroxide to water and oxygen and thus diminishes the toxic effects of hydrogen peroxide. Catalase stimulates growth of cells including T-cells, B-cells, myeloid leukemia cells, melanoma cells, mastocytoma cells and normal and transformed fibroblast cells. Catalase gene polymorphisms are linked with decreases in catalase activity nevertheless, to date, acatalasemia is the only disease known to be caused by the CAT gene.

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