

## Recombinant Human CAT Protein, His-tagged

**Cat. No.** CAT-630H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Product Overview</b> | Recombinant Human CAT Protein (Asp10-Asn507) with His tag was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>ProteinLength</b>    | Asp10-Asn507                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description</b>      | <p>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.</p> |
| <b>Form</b>             | Freeze-dried powder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Molecular Mass</b>   | Predicted Molecular Mass: 60.4 kDa; Accurate Molecular Mass: 60 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Purity</b>           | > 90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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|                       |                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applications</b>   | Positive Control; Immunogen; SDS-PAGE; WB.                                                                                                                                                                                                                                                                                                   |
| <b>Stability</b>      | The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition. |
| <b>Storage</b>        | Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.                                                                                                                                                                                                                 |
| <b>Storage Buffer</b> | 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.                                                                                                                                                                                                                                          |
| <b>Reconstitution</b> | Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.                                                                                                                                                                                                                                            |

## GENE INFORMATION

|                        |                                       |
|------------------------|---------------------------------------|
| <b>Gene Name</b>       | CAT catalase [ Homo sapiens (human) ] |
| <b>Official Symbol</b> | CAT                                   |
| <b>Synonyms</b>        | CAT; catalase; MGC138422; MGC138424;  |
| <b>Gene ID</b>         | 847                                   |
| <b>mRNA Refseq</b>     | NM_001752                             |
| <b>Protein Refseq</b>  | NP_001743                             |
| <b>MIM</b>             | 115500                                |

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UniProt ID

P04040

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