

## Human CAT Knockdown Cell Lysate

Cat. No. CAT-088HKCL Lot. No. (See product label)

### SPECIFICATION

|                         |  |
|-------------------------|--|
| <b>Product Overview</b> | WB-validated CAT Knockdown HeLa Cell Lysate  |
| <b>Species</b>          | Human  |
| <b>Source</b>           | HeLa   |
| <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>             | Cell-Tissue Lysis buffer   |
| <b>Molecular Mass</b>   | 62 kDa   |
| <b>Notes</b>            | <p>Instruction of use: This knockdown cell lysate should be paired with wild-type HeLa cell lysate for use. For Western blotting, we recommend running wild-type and knockdown lysates on the same gel, and loading each well with equal volume and equal amount of total proteins.</p>  |

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|-------------------------|--|
| <b>Storage</b>          | Store at -20 centigrade for two years.   |
| <b>Concentration</b>    | Lot-specific   |
| <b>Shipping</b>         | Blue Ice   |
| <b>Components</b>       | 1 vial of 100 µg WT HeLa cell lysate 1 vial of 100 µg CAT KD HeLa cell lysate                      |
| <b>Protein Families</b> | Druggable Genome   |
| <b>Protein Pathways</b> | Amyotrophic lateral sclerosis (ALS), Metabolic pathways, Methane metabolism, Tryptophan metabolism |
| <b>Lysate QC</b>        | RT-qPCR; Western Blotting (WB)   |

## 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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