

## Recombinant Human CASP3

**Cat. No.** CASP3-26768TH    **Lot. No.** (See product label)

### SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>    | Active Recombinant Human Caspase-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>              | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Description</b>         | <p>This gene encodes a protein which is a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes which undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. This protein cleaves and activates caspases 6, 7 and 9, and the protein itself is processed by caspases 8, 9 and 10. It is the predominant caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimers disease. Alternative splicing of this gene results in two transcript variants that encode the same protein.</p> |
| <b>Tissue specificity</b>  | Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Biological activity</b> | Specific Activity:300,000 - 400,000 units/mg.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Form</b>                | Lyophilised:Reconstitute to 0.1 µg/µl in PBS containing 15% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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|                              |                                                                  |
|------------------------------|------------------------------------------------------------------|
| <b>Purity</b>                | >90% by SDS-PAGE                                                 |
| <b>Storage buffer</b>        | Preservative: None<br>Constituents: 15% Glycerol, PBS            |
| <b>Storage</b>               | Aliquot and store at -80°C. Avoid repeated freeze / thaw cycles. |
| <b>Sequence Similarities</b> | Belongs to the peptidase C14A family.                            |

## GENE INFORMATION

|                            |                                                                                                                                                  |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | CASP3 caspase 3, apoptosis-related cysteine peptidase [ Homo sapiens ]                                                                           |
| <b>Official Symbol</b>     | CASP3                                                                                                                                            |
| <b>Synonyms</b>            | CASP3; caspase 3, apoptosis-related cysteine peptidase; caspase 3, apoptosis related cysteine protease; caspase-3; apopain; CPP32; CPP32B; Yama; |
| <b>Gene ID</b>             | 836                                                                                                                                              |
| <b>mRNA Refseq</b>         | NM_004346                                                                                                                                        |
| <b>Protein Refseq</b>      | NP_004337                                                                                                                                        |
| <b>MIM</b>                 | 600636                                                                                                                                           |
| <b>Uniprot ID</b>          | P42574                                                                                                                                           |
| <b>Chromosome Location</b> | 4q34                                                                                                                                             |
| <b>Pathway</b>             | Activation of DNA fragmentation factor, organism-specific biosystem; Activation of                                                               |

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caspases through apoptosome-mediated cleavage, organism-specific biosystem;  
Alpha6-Beta4 Integrin Signaling Pathway, organism-specific biosystem; Alzheimers  
disease, organism-specific biosystem; Alzheimers disease, conserved biosystem;

**Function**

aspartic-type endopeptidase activity; cyclin-dependent protein kinase inhibitor activity;  
cysteine-type endopeptidase activity; peptidase activity; protein binding;

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