

Recombinant Human CASP1 Protein (N120-D297, A317-H404), Tag Free

Cat. No. CASP1-1265H Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant Human CASP1(N120-D297, A317-H404 end) (T388A) Protein was expressed in E. coli.

Species

Human

Source

E.coli

ProteinLength

N120-D297, A317-H404

Description

Thiol protease involved in a variety of inflammatory processes by proteolytically cleaving other proteins, such as the precursors of the inflammatory cytokines interleukin-1 beta (IL1B) and interleukin 18 (IL18) as well as the pyroptosis inducer Gasdermin-D (GSDMD), into active mature peptides. Plays a key role in cell immunity as an inflammatory response initiator: once activated through formation of an inflammasome complex, it initiates a proinflammatory response through the cleavage of the two inflammatory cytokines IL1B and IL18, releasing the mature cytokines which are involved in a variety of inflammatory processes. Cleaves a tetrapeptide after an Asp residue at position P1 (). Also initiates pyroptosis, a programmed lytic cell death pathway, through cleavage of GSDMD. In contrast to cleavage of interleukins IL1B and IL1B, recognition and cleavage of GSDMD is not strictly dependent on the consensus cleavage site but depends on an exosite interface on CASP1 that recognizes and binds the Gasdermin-D, C-terminal (GSDMD-CT) part. Upon inflammasome activation, during DNA virus infection but not RNA virus

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challenge, controls antiviral immunity through the cleavage of CGAS, rendering it inactive. In apoptotic cells, cleaves SPHK2 which is released from cells and remains enzymatically active extracellularly.

| | |
|-----------------------|---|
| Form | Liquid |
| Endotoxin | < 0.01 EU per µg of the protein |
| Purity | 90% |
| Stability | Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade. |
| Storage | Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| Storage Buffer | Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol |
| Shipping | It is shipped out with blue ice. |

GENE INFORMATION

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|------------------------|--|
| Gene Name | CASP1 caspase 1, apoptosis-related cysteine peptidase [Homo sapiens (human)] |
| Official Symbol | CASP1 |
| Synonyms | CASP1; caspase 1, apoptosis-related cysteine peptidase; caspase 1, apoptosis related cysteine peptidase (interleukin 1, beta, convertase), caspase 1, apoptosis related cysteine protease (interleukin 1, beta, convertase), IL1BC; caspase-1; caspase 1; ICE; interleukin 1; beta; convertase; IL1B-convertase; CASP1 nirs variant 1; IL-1 beta-converting enzyme; interleukin 1, beta, convertase; interleukin 1-B |

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converting enzyme; caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase); P45; IL1BC;

Gene ID 834

mRNA Refseq NM_001223

Protein Refseq NP_001214

MIM 147678

UniProt ID P29466

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