

# CASP1 Antibody

Catalog No: #32096

Package Size: #32096-1 50ul #32096-2 100ul

Orders: [order@signalwayantibody.com](mailto:order@signalwayantibody.com)Support: [tech@signalwayantibody.com](mailto:tech@signalwayantibody.com)

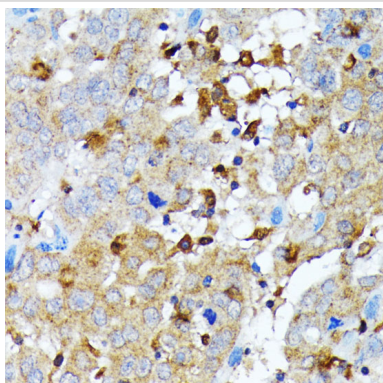
## Description

|                       |                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Product Name          | CASP1 Antibody                                                                                                                      |
| Host Species          | Rabbit                                                                                                                              |
| Clonality             | Polyclonal                                                                                                                          |
| Purification          | Antibodies were purified by affinity purification using immunogen.                                                                  |
| Applications          | WB,IHC,IF                                                                                                                           |
| Species Reactivity    | Human,Mouse,Rat                                                                                                                     |
| Specificity           | The antibody detects endogenous level of total CASP1 protein.                                                                       |
| Immunogen Type        | Recombinant Protein                                                                                                                 |
| Immunogen Description | Recombinant protein of human CASP1.                                                                                                 |
| Conjugates            | Unconjugated                                                                                                                        |
| Target Name           | CASP1                                                                                                                               |
| Other Names           | CASP1; ICE; IL1BC; P45; Caspase-1                                                                                                   |
| Accession No.         | Swiss-Prot:P29466NCBI Gene ID:834                                                                                                   |
| SDS-PAGE MW           | 45KD                                                                                                                                |
| Concentration         | 1.0mg/ml                                                                                                                            |
| Formulation           | Supplied at 1.0mg/mL in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. |
| Storage               | Store at -20°C                                                                                                                      |

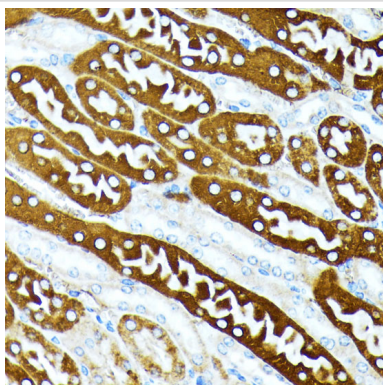
## Application Details

WB 1:500 - 1:2000IHC 1:50 - 1:200IF 1:50 - 1:200IP 1:50 - 1:100

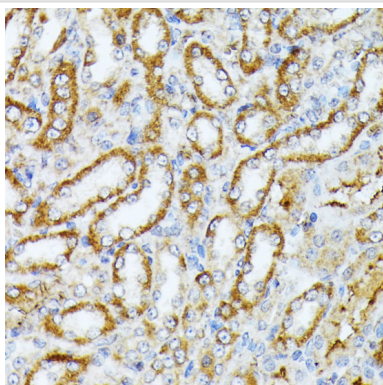
## Images



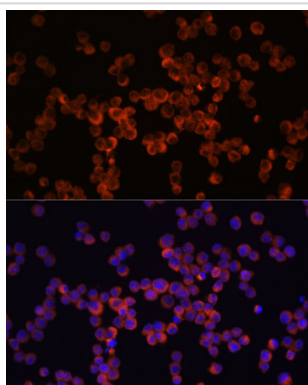
Immunohistochemistry of paraffin-embedded human liver cancer using Caspase-1 at dilution of 1:100 (40x lens).



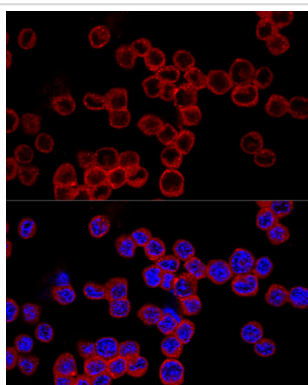
Immunohistochemistry of paraffin-embedded mouse kidney using Caspase-1 at dilution of 1:100 (40x lens).



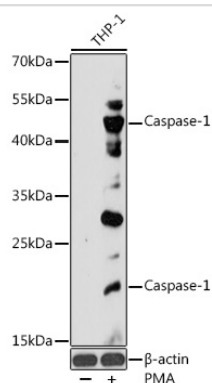
Immunohistochemistry of paraffin-embedded rat kidney using Caspase-1 at dilution of 1:100 (40x lens).



Immunofluorescence analysis of Raw264.7 cells using Caspase-1 Polyclonal at dilution of 1:100 (40x lens). Blue: DAPI for nuclear staining.



Confocal immunofluorescence analysis of Raw264.7 cells using Caspase-1 Polyclonal at dilution of 1:200. Blue: DAPI for nuclear staining.



Western blot analysis of extracts of THP-1 cells, using Caspase-1 at 1:1000 dilution. THP-1 cells were treated by PMA (80 nM) at 37°C for overnight.

## Background

Caspase-1, or interleukin-1 $\beta$  converting enzyme (ICE/ICE $\alpha$ ), is a class I cysteine protease, which also includes caspases -4, -5, -11, and -12. Caspase-1 cleaves inflammatory cytokines such as pro-IL-1 $\beta$  and interferon- $\gamma$ ; inducing factor (IL-18) into their mature forms (1,2). Like other caspases, caspase-1 is proteolytically activated from a proenzyme to produce a tetramer of its two active subunits, p20 and p10. Caspase-1 has a large amino-terminal pro-domain that contains a caspase recruitment domain (CARD). Overexpression of caspase-1 can induce apoptosis (3). Mice deficient in caspase-1, however, have no overt defects in apoptosis but do have defects in the maturation of pro-IL-1 $\beta$  and are resistant to endotoxic shock (4,5). At least six caspase-1 isoforms have been identified, including caspase-1  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\epsilon$ , and  $\zeta$  (6). Most caspase-1 isoforms ( $\alpha$ ,  $\beta$ ,  $\gamma$ , and  $\delta$ ;) produce products between 30-48 kDa and induce apoptosis upon over-expression. Caspase-1  $\epsilon$ ; typically contains only the p10 subunit, does not induce apoptosis and may act as a dominant negative. The widely expressed  $\zeta$ ; isoform of caspase-1 induces apoptosis and lacks 39 amino-terminal residues found in the  $\alpha$  isoform (6). Activation of caspase-1 occurs through an oligomerization molecular platform designated the "inflammasome" that includes caspase-5, Pycard/Asc, and NALP1 (7).

## Published Papers

et al., Alpha-lipoic acid alleviates NAFLD and triglyceride accumulation in liver via modulating hepatic NLRP3 inflammasome activation pathway in type 2 diabetic rats. In Food Sci Nutr on 2021 Mar 13 by Chih-Yuan Ko, Yangming Martin Lo, et al..PMID: 34026086, , (2021)

[PMID:34026086](#)

Jiaying Liu;Yuanfan Chen;Jing Zhang;Yun Zheng;Yun An;Chenglai Xia;Yonger Chen;Song Huang;Shaozhen Hou;Dong Deng et al., Vitexin alleviates MNNG-induced chronic atrophic gastritis via inhibiting NLRP3 inflammasome., , (2025)

[PMID:39716512](#)

Note: This product is for in vitro research use only and is not intended for use in humans or animals.