

Caspase-1 (D7F10) Rabbit mAb



100 µl
 (10 western blots)

Orders ■ 877-616-CELL (2355)
 orders@cellsignal.com
Support ■ 877-678-TECH (8324)
 info@cellsignal.com
Web ■ www.cellsignal.com

rev. 02/1610

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #834
Swiss-Prot Acc. #P29466

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, (Mk)	48, 20 kDa	Rabbit IgG**

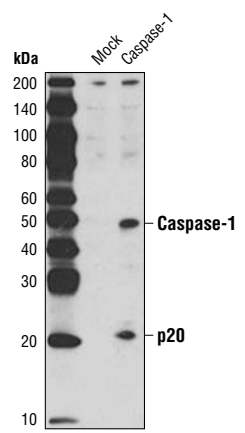
Background: Caspase-1, or interleukin-1 β converting enzyme (ICE/ICE α), is a class I cysteine protease, which also includes caspases -4, -5, -11, and -12. Caspase-1 cleaves inflammatory cytokines such as pro-IL-1 β and interferon- γ inducing factor (IL-18) into their mature forms (1,2). Like other caspases, 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 β and are resistant to endotoxin shock (4,5). At least six caspase-1 isoforms have been identified, including caspase-1 α , β , γ , δ , ϵ and ζ (6). Most caspase-1 isoforms (α , β , γ and δ) produce products between 30-48 kDa and induce apoptosis upon over-expression. Caspase-1 ϵ typically contains only the p10 subunit, does not induce apoptosis and may act as a dominant negative. The widely expressed ζ isoform of caspase-1 induces apoptosis and lacks 39 amino-terminal residues found in the α isoform (6). Activation of caspase-1 occurs through an oligomerization molecular platform designated the "inflammasome" that includes caspase-5, Pycard/Asc, and NALP1 (7).

Specificity/Sensitivity: Caspase-1 (D7F10) Rabbit mAb detects endogenous levels of full length human Caspase-1. The activated p20 subunit was detected by over-expression.

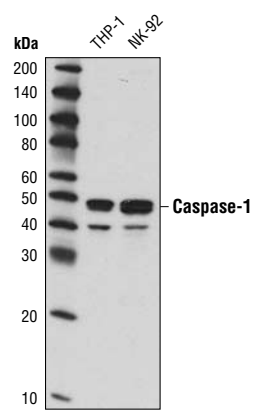
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues within the p20 subunit of human caspase-1.

Background References:

- (1) Thornberry, N.A. et al. (1992) *Nature* 356, 768-74.
- (2) Martinon, F. and Tschopp, J. (2004) *Cell* 117, 561-74.
- (3) Miura, M. et al. (1993) *Cell* 75, 653-60.
- (4) Kuida, K. et al. (1995) *Science* 267, 2000-3.
- (5) Li, P. et al. (1995) *Cell* 80, 401-11.
- (6) Feng, Q. et al. (2004) *Genomics* 84, 587-91.
- (7) Martinon, F. et al. (2002) *Mol Cell* 10, 417-26.



Western blot analysis of extracts from COS cells, untransfected or transfected with human caspase-1, using Caspase-1 (D7F10) Rabbit mAb.



Western blot analysis of extracts from THP-1 and NK-92 cells using Caspase-1 (D7F10) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.