

#2225 Store at -20°C

Caspase-1 Antibody



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Orders: 877-616-CELL (2355)
orders@cellsignal.com

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Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	20 p20. 30 to 45 beta, delta, gamma. 50 alpha.	Rabbit	#P29466	834

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Caspase-1 Antibody detects endogenous levels of pro-caspase-1 and the caspase-1 p20 subunit. The antibody is expected to detect alpha, beta, gamma and delta isoforms.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues within the p20 subunit of human caspase-1. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Caspase-1, or interleukin-1β converting enzyme (ICE/ICEα), is a class I cysteine protease, which also includes caspases -4, -5, -11, and -12. Caspase-1 cleaves inflammatory cytokines such as pro-IL-1β 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-1β and are resistant to endotoxic 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 overexpression. 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).	
Background References	<ol style="list-style-type: none"> 1. Thornberry, N.A. et al. (1992) <i>Nature</i> 356, 768-74. 2. Martinon, F. and Tschopp, J. (2004) <i>Cell</i> 117, 561-74. 3. Miura, M. et al. (1993) <i>Cell</i> 75, 653-60. 4. Kuida, K. et al. (1995) <i>Science</i> 267, 2000-3. 5. Li, P. et al. (1995) <i>Cell</i> 80, 401-11. 6. Feng, Q. et al. (2004) <i>Genomics</i> 84, 587-91. 7. Martinon, F. et al. (2002) <i>Mol Cell</i> 10, 417-26. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected

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