

#4450 Store at -20°C

# Caspase-4 Antibody

✓ 100 µl  
(10 western blots)



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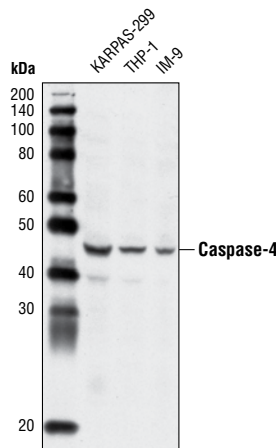
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, (Mk)	45 kDa	Rabbit**

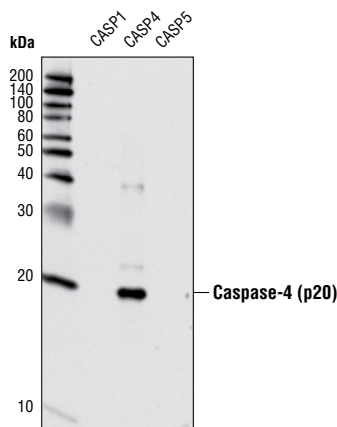
**Background:** Caspase-4 (TX/ICH-2/ICE<sub>rel</sub> II) is a member of the caspase family of proteases that play a key role in the execution of apoptosis and activation of inflammatory cytokines (1-3). Expression of caspase-4 has been observed in most tissues except brain, with highest levels in placenta, lung, spleen, and peripheral blood lymphocytes (PBL). Caspase-4 was originally found to contribute to Fas-mediated apoptosis (4). Several caspases (including caspase-4, caspase-5, and mouse caspase-11 and -12) are most closely related to caspase-1 and are capable of inducing apoptosis when over-expressed but are better characterized in the proteolytic activation of inflammatory cytokines (5). Caspase-4 associates with TRAF6 and is involved in the LPS inducible production of inflammatory cytokines IL-8 and MIP1 in THP-1 cells (6). While caspase-4 and mouse caspase-12 localize to the endoplasmic reticulum (ER) and may be activated by drugs that induce ER-stress (7), at least one study suggests that caspase-4 and caspase-12 are not essential for the ER-stress induced apoptosis (8).

**Specificity/Sensitivity:** Caspase-4 Antibody detects endogenous levels of total caspase-4 protein. Processing intermediate forms of caspase-4 are observed at 40 kDa and 32 kDa as previously reported (7). The antibody does not cross-react with other caspases.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ile125 within the p20 subunit of human caspase-4 protein. Antibodies were purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from KARPAS-299, THP-1 and IM-9 cells using Caspase-4 Antibody.



Western blot analysis of extracts from recombinant, active caspase-1, -4, and -5 using Caspase-4 Antibody.

Entrez-Gene ID #837  
Swiss-Prot Acc. #P49662

**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.

\*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

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**Background References:**

- (1) Faucheu, C. et al. (1995) *EMBO J* 14, 1914-22.
- (2) Kamens, J. et al. (1995) *J Biol Chem* 270, 15250-6.
- (3) Munday, N.A. et al. (1995) *J Biol Chem* 270, 15870-6.
- (4) Kamada, S. et al. (1997) *Oncogene* 15, 285-90.
- (5) Martinon, F. and Tschopp, J. (2007) *Cell Death Differ* 14, 10-22.
- (6) Lakshmanan, U. and Porter, A.G. (2007) *J Immunol* 179, 8480-90.
- (7) Hitomi, J. et al. (2004) *J Cell Biol* 165, 347-56.
- (8) Obeng, E.A. and Boise, L.H. (2005) *J Biol Chem* 280, 29578-87.

**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.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.