Revision 1

Store at -20C

#4429

Caspase-5 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	48, 20	Rabbit	#P51878	838

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-5 Antibody detects endogenous levels of total caspase-5 protein. This antibody detects the p20 subunit of active caspase-5.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu130 within the p20 subunit of human caspase-5 protein. Antibodies were purified by protein A and peptide affinity chromatography.

Background

Caspase-5 (Ich-3/ICE_{rel}III/TY) is a member of the caspase family of cysteine proteases that play a key role in the execution of apoptosis and activation of inflammatory cytokines (1-3). Caspase-5 is widely expressed, with highest expression observed in placenta and lung (1). Interferon-γ and LPS regulate expression of caspase-5 (2,4). Members of the caspase-1 subfamily of caspases, which includes caspase-4, -5, and murine caspase-11 and -12, can induce apoptosis when over-expressed and mediate the proteolytic activation of inflammatory cytokines (5). Processing of IL-1β occurs through the activation of an inflammasome complex consisting of caspase-1, caspase-5, Pycard and NALP1 (6). Transcription factor Max, a component of the Myc/Mad/Max network, is cleaved by caspase-5 during Fas-induced apoptosis (7). Several alternative spliced variants of caspase-5 have been identified (8). Frameshift mutations of caspase-5 have been observed in leukemia, lymphoma (9), and colorectal cancers (10).

Background References

1. Munday, N.A. et al. (1995) *J Biol Chem* 270, 15870-6.
2. Wang, S. et al. (1996) *J Biol Chem* 271, 20580-7.
3. Faucheu, C. et al. (1996) *Eur J Biochem* 236, 207-13.
4. Lin, X.Y. et al. (2000) *J Biol Chem* 275, 39920-6.
5. Martinon, F. and Tschopp, J. (2007) *Cell Death Differ* 14, 10-22.
6. Martinon, F. et al. (2002) *Mol Cell* 10, 417-26.
7. Krippner-Heidenreich, A. et al. (2001) *Biochem J* 358, 705-15.
8. Eckhart, L. et al. (2006) *Biochem Biophys Res Commun* 348, 682-8.
9. Takeuchi, S. et al. (2003) *Leuk Res* 27, 359-61.
10. Trojan, J. et al. (2004) *Int J Colorectal Dis* 19, 538-44.

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 BSA, 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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