

PRODUCT INFORMATION

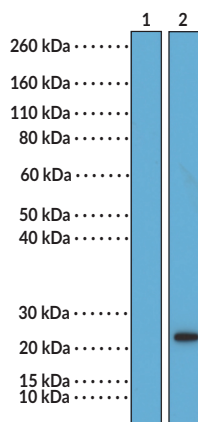
Caspase-8 (Cleaved) Rabbit Monoclonal Antibody (Clone RM442)

Item No. 42833

Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Apoptosis Protease Mch-5, CAP4, CASP-8, FADD-homologous ICE/ced-3-like Protease, FADD-like ICE, FLICE, ICE-like Apoptotic Protease 5, MACH, MORT-1-associated ced-3 Homolog
Immunogen:	A peptide corresponding to the internal region of caspase 8.
Cross Reactivity:	(+) Human cleaved caspase-8
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration:	1.0 mg/ml
Clone:	RM442
Host:	Rabbit
Isotype:	IgG
Applications:	Western blot (WB); the recommended starting dilution is 1:1,000 - 1:2,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Non-treated HeLa cells
Lane 2: Treated HeLa cells

WB of HeLa cells with or without UV treatment using Caspase-8 (Cleaved) Rabbit Monoclonal Antibody (Clone RM442) at a dilution of 1:2,000.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Caspase-8 is an initiator caspase with roles in cell death, including induction of apoptosis and pyroptosis and inhibition of necroptosis.¹ It is widely expressed during development and adulthood with high levels of expression in the heart and limb buds, as well as other tissues, in development and in leukocytes in adulthood.² It localizes to the cytosol and can be found in the lamella of migrating cells.³ Caspase-8 is produced as an inactive proenzyme containing a prodomain, which is composed of two N-terminal death-effector domains (DEDs), and two C-terminal catalytic subunits: p18 and p10.^{1,4} Activation of the proenzyme occurs when it binds to the death-inducing signaling complex (DISC), which is composed of CD95, a Fas-associated death domain (FADD) protein, and cellular FLICE-like inhibitory protein (c-FLIP). Upon DISC binding, procaspase-8 is cleaved to release the p10 subunit, then the p18 subunit. Together, two of each subunit form an activated and stabilized heterotetramer, which cleaves other procaspases, including procaspase-3 and procaspase-7, to initiate the extrinsic apoptosis pathway. Caspase-8 also has a role in the innate immune response via its activation by toll-like receptor 4 (TLR4) signaling and its initiation of the pyroptosis pathway through the NOD-like receptor protein 3 (NLRP3) inflammasome.¹ Mutations in *CASP8*, the gene encoding caspase-8, or dysfunctional caspase-8 activity are associated with a variety of conditions, including autoimmune disorders, immunodeficiencies, and an increased risk of cancer. Cayman's Caspase-8 (Cleaved) Rabbit Monoclonal Antibody (Clone RM442) be used for Western blot (WB).

References

1. Pang, J. and Vince, J.E. The role of caspase-8 in inflammatory signalling and pyroptotic cell death. *Semin. Immunol.* **70**, 101832 (2023).
2. Krüdering, M. and Evan, G.I. Caspase-8 in apoptosis: The beginning of "the end"? *IUBMB Life* **50**(2), 85-90 (2000).
3. Keller, N., Ozmadenci, D., Ichim, G., et al. Caspase-8 function, and phosphorylation, in cell migration. *Semin. Cell Dev. Biol.* **82**, 105-117 (2018).
4. Ivanisenko, N.V. and Lavrik, I.N. Mechanisms of procaspase-8 activation in the extrinsic programmed cell death pathway. *Mol. Biol. (Mosk)* **53**(5), 830-837 (2019).

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