

Cleaved Caspase Antibody Sampler Kit



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1 Kit (6 x 20 microliters)

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

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Cleaved Caspase-3 (Asp175) (5A1E) Rabbit mAb	9664	20 µl	17, 19 kDa	Rabbit IgG
Cleaved Caspase-6 (Asp162) Antibody	9761	20 µl	18 kDa	Rabbit
Cleaved Caspase-7 (Asp198) (D6H1) Rabbit mAb	8438	20 µl	18 kDa	Rabbit IgG
Cleaved Caspase-9 (Asp330) (E5Z7N) Rabbit mAb	52873	20 µl	37 kDa	Rabbit IgG
Cleaved Caspase-9 (Asp315) Antibody	9505	20 µl	35 kDa	Rabbit
Cleaved PARP (Asp214) (D64E10) XP [®] Rabbit mAb	5625	20 µl	89 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Cleaved Caspase Antibody Sampler Kit provides an economical means to evaluate the activation status of caspases by detecting their cleaved forms. The kit contains enough primary and secondary antibodies to perform two western blot experiments with each primary antibody.

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.

Background

Apoptosis is a regulated physiological process leading to cell death. Caspases, a family of cysteine acid proteases, are central regulators of apoptosis. Initiator caspases (including 8, 9, 10, and 12) are closely coupled to proapoptotic signals. Once activated, these caspases cleave and activate downstream effector caspases (including 3, 6, and 7), which in turn cleave cytoskeletal and nuclear proteins like PARP, α-fodrin, DFF, and lamin A and induce apoptosis. Cytochrome c released from mitochondria is coupled to the activation of caspase-9, a key initiator caspase (1). Proapoptotic stimuli include FasL, TNF-α, DNA damage and ER stress. Fas and TNFR activate caspase-8 and -10 (2), DNA damage leads to the activation of caspase-9 and ER stress leads to the calcium-mediated activation of caspase-12 (3). The inhibitor of apoptosis protein (IAP) family includes XIAP and survivin and functions by binding and inhibiting several caspases (4,5). Smac/Diablo, a mitochondrial protein, is released into the cytosol upon mitochondrial stress and competes with caspases for binding of IAPs. The interaction of Smac/Diablo with IAPs relieves the inhibitory effects of IAPs on caspases (6).

Background References

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2. Budihardjo, I. et al. (1999) *Annu. Rev. Cell Dev. Biol.* 15, 269-290.
3. Nakagawa, T. et al. (2000) *Nature* 403, 98-103.
4. Deveraux, Q. L. et al. (1998) *EMBO J.* 17, 2215-2223.
5. Li, F. et al. (1998) *Nature* 396, 580-584.
6. Du, C. et al. (2000) *Cell* 102, 33-42.

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