Revision 1

Caspase-2 (C2) Mouse mAb

Store at -20C

#2224

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Orders: 877-616-CELL (2355)
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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/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	12, 14, 48	Mouse IgG1	#P42575	835

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, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Caspase-2 (C2) Mouse mAb detects endogenous levels of procaspase-2 as well as its 14 and 12 kDa cleaved fragments.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the carboxy-terminal portion of human caspase-2.

Background

Caspase-2 (Nedd2/ICH-1) is a Class I caspase with a long prodomain necessary for nuclear localization. Upon activation of the apoptotic pathway, the procaspase is cleaved at Asp316, producing a 14 kDa fragment and a 32 kDa prodomain/large subunit. Subsequent processing at Asp152 and Asp330 produces an 18 kDa large subunit and a 12 kDa small fragment (1). Caspase-2 is the nuclear apoptotic respondent to cellular genotoxic stress or mitotic catastrophe. Activation occurs upon recruitment to a complex containing a p53-induced death domain protein, PIDD (2). This suggests caspase-2 can be a nuclear initiator caspase with a requirement for caspase-9 and caspase-3 activation in downstream apoptotic events (3, 4). In apoptotic pathways resulting from UV-induced DNA damage, processing of caspase-2 occurs downstream of mitochondrial dysfunction and of caspase-9 and caspase-3 activation, extending a possible role for caspase-2 as a parallel effector caspase (5).

Background References

1. Li, H. et al. (1997) *J. Biol. Chem* 272, 21010-21017.
2. Tinel, A. and Tschopp, J. (2004) *Science* 304, 843-846.
3. Dirsch, V. M. et al. (2004) *Oncogene* 23, 1586-1593.
4. Castedo, M. et al. (2004) *Oncogene* 23, 4362-4370.
5. Paroni, G. et al. (2001) *J. Biol. Chem.* 276, 21907-21915.

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

W: Western Blotting

Cross-Reactivity Key

H: Human

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Limited Uses

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