

#2224 Store at -20°C

Caspase-2 (C2) Mouse mAb



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	12, 14, 48	Mouse IgG1	#P42575	835

Product Usage Information	Application Western Blotting	Dilution 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	<ol style="list-style-type: none"> Li, H. et al. (1997) <i>J. Biol. Chem</i> 272, 21010-21017. Tinel, A. and Tschopp, J. (2004) <i>Science</i> 304, 843-846. Dirsch, V. M. et al. (2004) <i>Oncogene</i> 23, 1586-1593. Castedo, M. et al. (2004) <i>Oncogene</i> 23, 4362-4370. Paroni, G. et al. (2001) <i>J. Biol. Chem.</i> 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	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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