

Initiator Caspases Antibody Sampler Kit

Cat# AK0176

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

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 2, 8, 9, 10 and 12) are closely coupled to proapoptotic signals, which include FasL, TNF- α , and DNA damage. Once activated, these caspases cleave and activate downstream effector caspases (including 3, 6 and 7), which in turn cleave cytoskeletal and nuclear proteins such as PARP, α -fodrin, DFF and lamin A; inducing apoptosis. Formation of a death-inducing signaling complex (DISC) around the receptors for death factors, including FasL and TNF- α , is essential for receptor-mediated apoptosis. Upon ligand activation, Fas and TNF-R1 associate with death domain (DD) containing adaptor proteins FADD (Fas associated death domain) and TRADD (TNF-R1 associated death domain). In addition to a carboxy-terminal DD, FADD contains an amino-terminal death effector domain (DED) that binds to DEDs and activates initiator caspase 8 (FLICE, Mch5, MACH) and caspase 10 (FLICE2, Mch4). TRADD does not contain a DED and therefore must associate with FADD in response to TNF-R1 driven apoptosis. Caspase-9 (ICE-LAP6, Mch6) is activated through the mitochondrial-mediated pathway. Cytochrome c released from mitochondria associates with procaspase-9 (47 kDa)/Apaf-1. Apaf-1 mediated activation of caspase-9 involves proteolytic processing resulting in cleavage at Asp315 and producing a p35 subunit. Another cleavage occurs at Asp330 producing a p37 subunit that can amplify the apoptotic response. Caspase-2 (Nedd2/ICH-1) is the nuclear apoptotic respondent to cellular genotoxic stress or mitotic catastrophe. 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. Activation occurs upon recruitment to a complex containing a p53-induced death domain protein, PIDD. This suggests that caspase-2 can be a nuclear initiator

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340466	CASP9 Polyclonal Antibody	20 μ L	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340458	CASP3 Polyclonal Antibody	20 μ L	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340456	CASP2 Polyclonal Antibody	20 μ L	WB, IHC, ELISA	Human	Rabbit

A340464	CASP8 Polyclonal Antibody	20μL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120μL	WB, ELISA	Rabbit	Goat

PRODUCT USE LIMITATION

These products are intended for research use only.