

Procaspase Antibody Sampler Kit

Cat# AK0250

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 the 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 like PARP, α -fodrin, DFF and lamin A, and induce apoptosis. Caspase-8 (FLICE, Mch5, MACH) and Caspase-9 (ICE-LAP6, Mch6) are initiator caspases. CD95 receptor (Fas/APO-1) and tumor necrosis factor receptor 1 (TNFR1) activate caspase-8, leading to the release of the caspase-8 active fragments, p18 and p10. Cytochrome c released from the mitochondria associates with procaspase-9 (47 kDa)/Apaf 1. Apaf-1 mediated activation of caspase-9 involves intrinsic proteolytic processing resulting in cleavage at Asp315 and producing a p35 subunit. Another cleavage occurs at Asp330 producing a p37 subunit that can serve to amplify the apoptotic response. Caspase-3 (CPP-32, Apoptain, Yama, SCA-1), Caspase-6 (Mch2), and Caspase-7 (CMH-1, Mch3, ICE-LAP3) are effector caspases. Activation of caspase-3 requires proteolytic processing of its inactive zymogen/proform into activated p17 and p12 subunits. Procaspase-7 is activated through proteolytic processing by upstream caspases at Asp23, Asp198, and Asp206 to produce the mature subunits. Procaspase-6 is cleaved by caspase-3 at Asp23, Asp179 and Asp193 to form active large (p18) and small (p11) subunits. PARP, a 116 kDa nuclear poly (ADP-ribose) polymerase, appears to be involved in DNA repair in response to environmental stress. This protein can be cleaved by many ICE-like caspases in vitro and is one of the main cleavage targets of caspase-3 in vivo. In human PARP, the cleavage occurs between Asp214 and Gly215, which separates the PARP amino-terminal DNA binding domain (24 kDa) from the carboxy-terminal catalytic domain (89 kDa). PARP

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340458	CASP3 Polyclonal Antibody	20 μ L	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340460	CASP6 Polyclonal Antibody	20 μ L	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340462	CASP7 Polyclonal Antibody	20 μ L	WB, IHC, ELISA	Human	Rabbit

A340464	CASP8 Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340466	CASP9 Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340581	LMNA Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340740	PARP1 Polyclonal Antibody	20µL	WB, 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.