

Product name:	Caspase-6 (13P13) Rabbit Monoclonal Antibody
Cat number:	MABN07974
Conjugate:	Unconjugated
Size:	100µL
Clone:	Monoclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	A synthetic peptide of human Caspase-6
Reactivity:	Human, Mouse, Rat
Applications:	WB 1:500-1:2000, IHC 1:200-1:1000, ICC/IF 1:200-1:500, IP 1:50-1:100
Molecular Weight:	33kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

Caspase-6 (Mch2) is one of the major executioner caspases functioning in cellular apoptotic processes. Upon apoptotic stimulation, initiator caspases such as caspase-9 are cleaved and activated. The activated upstream caspases further process downstream executioner caspases, such as caspase-3 and caspase-6, by cleaving them into large and small subunits, thereby initiating a caspase cascade leading to apoptosis. One of the major targets for caspase-6 is the membrane associated protein lamin A. Cysteine protease that plays essential roles in programmed cell death, axonal degeneration, development and innate immunity (PubMed:8663580, PubMed:32298652). During apoptosis, localizes in the nucleus and cleaves the nuclear structural protein NUMA1 and lamin A/LMNA thereby inducing nuclear shrinkage and fragmentation (PubMed:17401638, PubMed:8663580, PubMed:9463409). Furthermore, cleaves many transcription factors such as NF-kappa-B and cAMP response element-binding protein/CREBBP (PubMed:10559921, PubMed:14657026). Cleaves phospholipid scramblase proteins XKR4 and XKR9 (By similarity). Plays an essential role in axon degeneration during axon pruning which is the remodeling of axons during neurogenesis but not apoptosis (By similarity). Regulates B-cell programs both during early development and after antigen stimulation (By similarity). In addition, promotes the ZBP1-mediated activation of programmed cell death pathways including pyroptosis, apoptosis, and necroptosis (PANoptosis) and plays an essential role in defense against viruses (PubMed:32298652). Mechanistically, interacts with RIPK3 and enhances the interaction between RIPK3 and ZBP1, leading to ZBP1-mediated inflammasome activation and cell death (PubMed:32298652).