

Mouse Anti-Caspase 3 (active/pro) [31A1067]: MC0123

Intended Use: For Research Use Only

Description: Caspases are a family of cysteine proteases that are key mediators of programmed cell death or apoptosis. The precursor form of all caspases is composed of a prodomain, and large and small catalytic subunits. The active forms of caspases are generated by several stimuli including ligand-receptor interactions, growth factor deprivation and inhibitors of cellular functions. All known caspases require cleavage adjacent to aspartates to liberate one large and one small subunit, which associate into a2b2 tetramer to form the active enzyme. Gene for Caspase 3 also known as Yama, CPP32, and apopain codes for a 32-kDa protein. Caspase 3 cleaves the death substrate poly(ADP-ribose) polymerase (PARP) to a specific 85 kDa form observed during apoptosis and is inhibitable by the CrmA protein. Other Caspase 3 substrates include DNA-PK, actin, GAS2, and procaspase-6, etc. Caspase 3 is activated by cleavage events at Asp-28/Ser-29 (between N-terminal pro-domain) and Asp-175/Ser-176 (between large and small subunits) to generate a large subunit of 17-kDa and a small subunit of 12-kDa. This antibody detects Caspase 3 active & pro from human samples.

Specifications

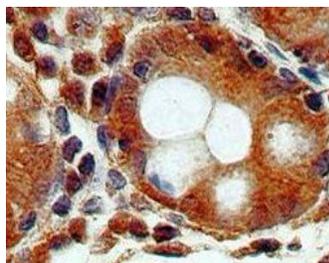
Clone: 31A1067
Source: Mouse
Isotype: IgG1
Reactivity: Human
Localization: Cytoplasm, possible nucleus
Formulation: Antibody in PBS pH7.4, containing 0.2% BSA and < 0.1% gelatin, 0.09% sodium azide (NaN3).
Storage: Store at 2°- 8°C.
Applications: IHC, ELISA, ICC/IF, IP, WB
Package:

Description	Catalog No.	Size
Caspase 3 (active/pro) Concentrated	MC0123	1 ml

IHC Procedure*

Positive Control Tissue: Tonsil, Staurosporine-treated HeLa or Jurkat cell lysate
Concentrated Dilution: 50-250
Pretreatment: Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
Incubation Time and Temp: 30-60 minutes @ RT
Detection: Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human breast cancer stained with anti-Caspase 3 (active/pro) using DAB (possible nucleus staining indicates active caspase 3)

References

1. Oncogenic properties of a spermatogenic meiotic variant of fer kinase expressed in somatic cells. Yaffe, E. et al. Cancer Res. 74: 6474-85, 2014.
2. High dietary taurine inhibits myocardial apoptosis during an atherogenic diet: association with increased myocardial HSP70 and HSF-1 but not caspase 3. Setyarani, M. et al. Eur J Nutr. 53: 929-37, 2014.
3. Flavonoid apigenin modified gene expression associated with inflammation and cancer and induced apoptosis in human pancreatic cancer cells through inhibition of GSK-3β/NF-κB signaling cascade. Johnson, JL. et al. Mol Nutr Food Res. 57: 2112-27, 2013.