
Anti-Caspase3

Cat #: HM1059
Rabbit polyclonal IgG
0.2 µg/µl, store at 4 °C

For research use only

BACKGROUND

Caspase3 is a member of caspase superfamily whose members also include Ced-3/Caspase1, Caspase2, Caspase4, Caspase6, Caspase7, Caspase9 and Caspase10. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes which undergo proteolytic processing at conserved aspartic residues to produce 2 subunits, large and small, that dimerize to form the active enzyme. Caspase3 can cleave and activate caspases 6, 7 and 9, and itself could be processed by caspases 8, 9 and 10 in response to apoptotic stimuli. Caspase3 has been shown to cleave nuclear protein PARP.

SPECIFICITY

This antibody specifically recognizes Caspase3 of human, mouse and rat origin and can be used in Western blotting, immunoprecipitation and immunostaining.

IMMUNOGEN

Full-length recombinant human Caspase3 protein.

STORAGE

This antibody is stable for 12 months when stored at 2-8°C.

REFERENCES

1. Fernandes-Alnemri,T., Litwack,G. and Alnemri,E.S. (1994) CPP32, a novel human apoptotic protein with homology to Caenorhabditis elegans cell death protein Ced-3 and mammalian interleukin-1 beta-converting enzyme. *J. Biol. Chem.* 269, 30761-30764.
2. Tewari,M., Quan,L.T., O'Rourke,K., Desnoyers,S., Zeng,Z., Beidler,D.R., Poirier,G.G., Salvesen,G.S. and Dixit,V.M. (1995) Yama/ CPP32 beta, a mammalian homolog of CED-3, is a CrmA-inhibitable protease that cleaves the death substrate poly(ADP-ribose) polymerase. *Cell* 81, 801-809
3. Fernandes-Alnemri,T., Armstrong,R.C., Krebs,J., Srinivasula,S.M., Wang,L., Bullrich,F., Fritz,L.C., Trapani,J.A., Tomaselli,K.J., Litwack,G. and Alnemri,E.S. (1996) In vitro activation of CPP32 and Mch3 by Mch4, a novel human apoptotic cysteine protease containing two FADD-like domains. *Proc. Natl. Acad. Sci. U.S.A.* 93, 7464-7469.
4. Kothakota,S., Azuma,T., Reinhard,C., Klippel,A., Tang,J., Chu,K., McGarry,T.J., Kirschner,M.W., Kohts,K., Kwiatkowski,D.J. and Williams,L.T. (1997) Caspase-3-generated fragment of gelsolin: effector of morphological change in apoptosis. *Science* 278, 294-298.
5. Lauber,K., Bohn,E., Krober,S.M., Xiao,Y.J., Blumenthal,S.G., Lindemann,R.K., Marini,P., Wiedig,C., Zobywalski,A., Baksh,S., Xu,Y., Autenrieth,I.B., Schulze-Osthoff,K., Belka,C., Stuhler,G. and Wesselborg,S. (2003) Apoptotic cells induce migration of phagocytes via caspase-3-mediated release of a lipid attraction signal. *Cell* 113, 717-730.

6. Torres,J., Rodriguez,J., Myers,M.P., Valiente,M., Graves,J.D., Tonks,N.K. and Pulido,R. (2003) Phosphorylation-regulated cleavage of the tumor suppressor PTEN by caspase-3: implications for the control of protein stability and PTEN-protein interactions. *J. Biol. Chem.* 278, 30652-30660.
7. Sironi,J.J. and Ouchi,T. (2004) STAT1-induced apoptosis is mediated by caspases 2, 3, and 7. *J. Biol. Chem.* 279, 4066-4074.
8. Aouad,S.M., Cohen,L.Y., Sharif-Askari,E., Haddad,E.K., Alam,A. and Sekaly,R.P. (2004) Caspase-3 is a component of Fas death-inducing signaling complex in lipid rafts and its activity is required for complete caspase-8 activation during Fas-mediated cell death. *J. Immunol.* 172, 2316-2323.

PRODUCT FROM HYPROMATRIX, INC.**A. AntibodyArray™s:**

1. Signal Transduction AntibodyArray™
Catalog Number HM3000
2. Apoptosis AntibodyArray™
Catalog Number HM4000
3. Cell Cycle AntibodyArray™
Catalog Number HM5000

B. Staining AntibodyArray™s

1. Staining AntibodyArray™ I
Catalog Number HM8100
2. AntibodyArray Staining Apparatus
Catalog Number HM8000

C. Antibodies**1. HRP-conjugated antibodies**

- anti-phosphotyrosine
Catalog Number HM2040
- anti-phosphoserine
Catalog Number HM2070
- anti-phosphothreonine
Catalog Number HM2090

and more...

2. Primary antibodies

HyPromatrix offers a variety of high quality antibodies. For a complete list of antibodies and their specificities, please visit our web site at www.hypromatrix.com.

CONTACT

HyPromatrix, Inc.
100 Barber Avenue
Worcester, MA 01606
USA

Tel: 508-856-7900
Fax: 508-302-0748
Email: contact@hypromatrix.com
Web: www.hypromatrix.com