Anti-Pro Caspase-3 Antibody

ER30804

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IF-Cell, IHC-P, FC, IHC-Fr
Molecular Wt:	Predicted band size: 32 kDa

Description: Caspase-3 is a caspase protein that interacts with caspase-8 and caspase-9. It is encoded by the CASP3 gene. CASP3 orthologs have been identified in numerous mammals for which complete genome data are available. Unique orthologs are also present in birds, lizards, lissamphibians, and teleosts. Caspase-3 shares many of the typical characteristics common to all currently-known caspases. For example, its active site contains a cysteine residue (Cys-163) and histidine residue (His-121) that stabilize the peptide bond cleavage of a protein sequence to the carboxy-terminal side of an aspartic acid when it is part of a particular 4-amino acid sequence. This specificity allows caspases to be incredibly selective, with a 20,000-fold preference for aspartic acid over glutamic acid. A key feature of caspases in the cell is that they are present as zymogens, termed procaspases, which are inactive until a biochemical change causes their activation. Each procaspase has an N-terminal large subunit of about 20 kDa followed by a smaller subunit of about 10 kDa, called p20 and p10, respectively.

Immunogen: Synthetic peptide within N-terminal human Caspase-3.

Positive control: Jurkat cell lysate, Ramos cell lysate, human brain tissue lysate, HepG2, A549, human liver carcinoma tissue, human tonsil tissue.

Subcellular location: Nucleus, cytoplasm,

Database links: SwissProt: P42574 Human

Recommended Dilutions:

WB	1:5,000
IF-Cell	1:200
IHC-P	1:200
FC	1:100-1:200
IHC-Fr	1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Immunogen affinity purified.

Images

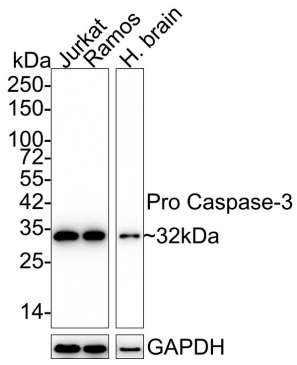

Fig1: Western blot analysis of Pro Caspase-3 on different lysates with Rabbit anti-Pro Caspase-3 antibody (ER30804) at 1/5,000 dilution.

Lane 1: Jurkat cell lysate
Lane 2: Ramos cell lysate
Lane 3: Human brain tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 32 kDa
Observed band size: 32 kDa

Exposure time: 3 minutes; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ER30804) at 1/5,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

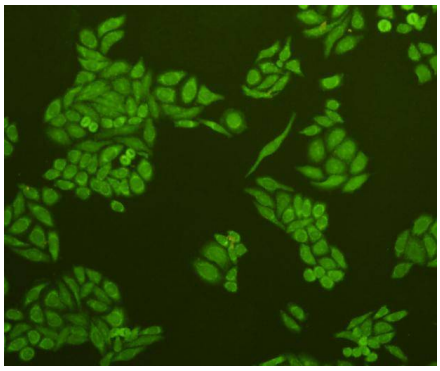

Fig2: ICC staining of Caspase-3 in HepG2 cells (green). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

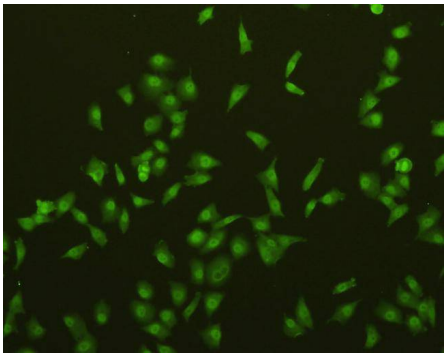

Fig3: ICC staining of Caspase-3 in A549 cells (green). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

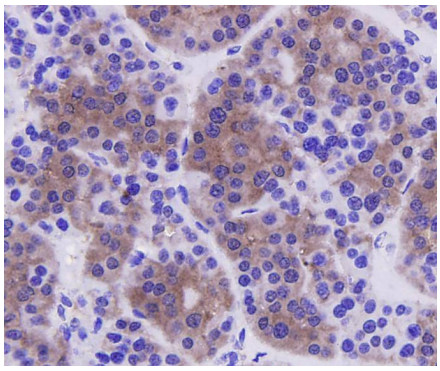

Fig4: Immunohistochemical analysis of paraffin-embedded human liver carcinoma tissue using anti-Caspase-3 antibody. Counter stained with hematoxylin.

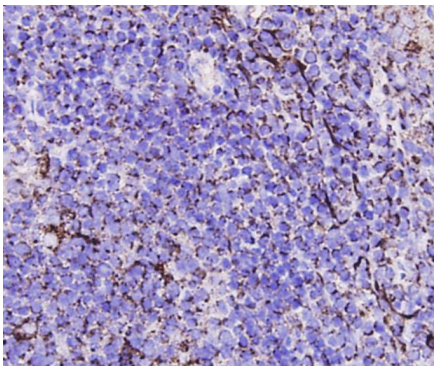

Fig5: Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-Caspase-3 antibody. Counter stained with hematoxylin.

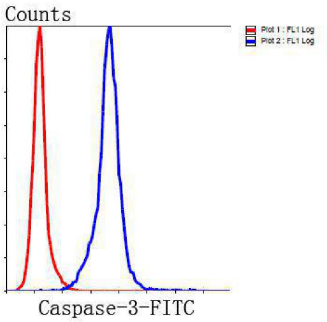

Fig6: Flow cytometric analysis of Hela cells with Caspase-3 antibody at 1/100 dilution (blue) compared with an unlabelled control (cells without incubation with primary antibody; red). Goat anti rabbit IgG (FITC) was used as the secondary antibody.

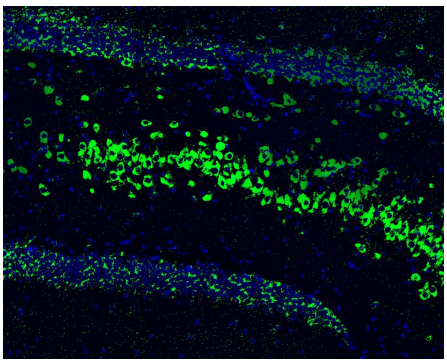

Fig7: Immunofluorescence analysis of frozen mouse hippocampus tissue labeling Pro Caspase-3 with Rabbit anti-Pro Caspase-3 antibody (ER30804).
The tissues were blocked in 3% BSA for 30 minutes at room temperature, washed with PBS, and then probed with the primary antibody (ER30804, green) at 1/100 dilution overnight at 4℃, washed with PBS. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) was used as the secondary antibody at 1/200 dilution. Nuclei were counterstained with DAPI (blue). Image acquisition was performed with KFBIO KF-FL-400 Scanner.

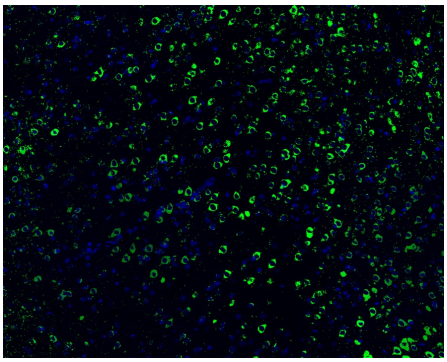

Fig8: Immunofluorescence analysis of frozen mouse cerebral cortex tissue labeling Pro Caspase-3 with Rabbit anti-Pro Caspase-3 antibody (ER30804).
The tissues were blocked in 3% BSA for 30 minutes at room temperature, washed with PBS, and then probed with the primary antibody (ER30804, green) at 1/100 dilution overnight at 4℃, washed with PBS. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) was used as the secondary antibody at 1/200 dilution. Nuclei were counterstained with DAPI (blue). Image acquisition was performed with KFBIO KF-FL-400 Scanner.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. "In vitro activation of CPP32 and Mch3 by Mch4, a novel human apoptotic cysteine protease containing two FADD-like domains." Fernandes-Alnemri T., Armstrong R.C., Krebs J.F., Srinivasula S.M., Wang L., Bullrich F., Fritz L.C., Proc. Natl. Acad. Sci. U.S.A. 93:7464-7469(1996)
2. "Potent and selective nonpeptide inhibitors of caspases 3 and 7 inhibit apoptosis and maintain cell functionality." Lee D., Long S.A., Adams J.L., Chan G., Vaidya K.S., Francis T.A., Kikly K., Winkler J.D., Sung C.-M., Nuttall M.E.J. Biol. Chem. 275:16007-16014(2000)