

## Product datasheet for **AM08377PU-N**

### Caspase 3 (CASP3) (Full length) Mouse Monoclonal Antibody [Clone ID: 31A1067]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	31A1067
Applications:	IHC, WB
Recommended Dilution:	<b>Immunohistochemistry on Paraffin Sections:</b> 5 µg/ml. <b>Western Blot:</b> 2 - 3 µg/ml.
Reactivity:	Human, Mouse
Host:	Mouse
Isotype:	IgG
Clonality:	Monoclonal
Immunogen:	Full-length recombinant Human Caspase-3
Specificity:	The antibody recognizes an epitope in the large domain subunit of Caspase-3. As such it will recognize pro Caspase-3 and the large subunit cleavage fragment.
Formulation:	PBS containing 0.05% Sodium Azide as preservative State: Purified State: Liquid purified Ig fraction
Concentration:	lot specific
Purification:	Protein G Chromatography
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	caspase 3
Database Link:	<a href="#">Entrez Gene 836 Human P42574</a>



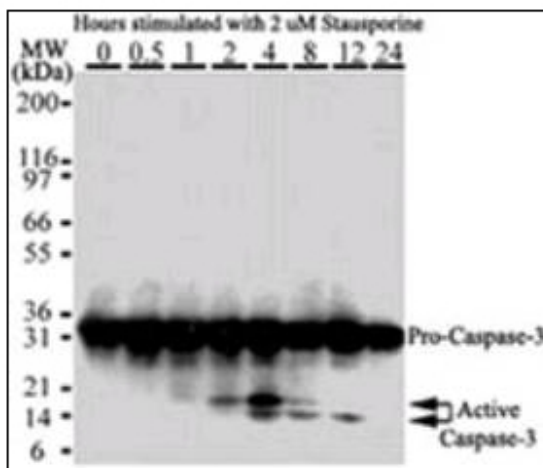
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**Background:**

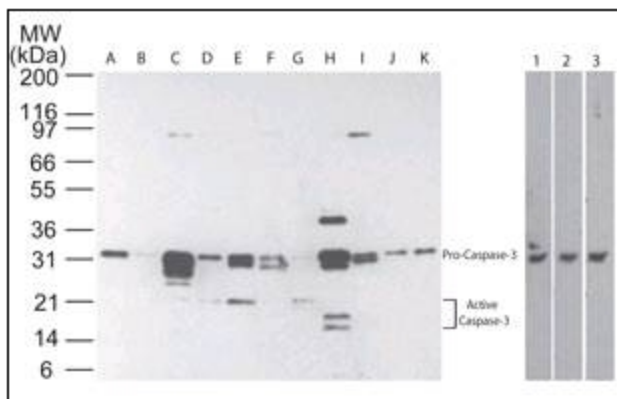
Caspases are a family of cysteine proteases that are key mediators of programmed cell death or apoptosis. The precursor form of all caspases is composed of a prodomain, and large and small catalytic subunits. The active forms of caspases are generated by several stimuli including ligand receptor interactions, 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 a  $\alpha_2\beta_2$  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.

**Synonyms:**

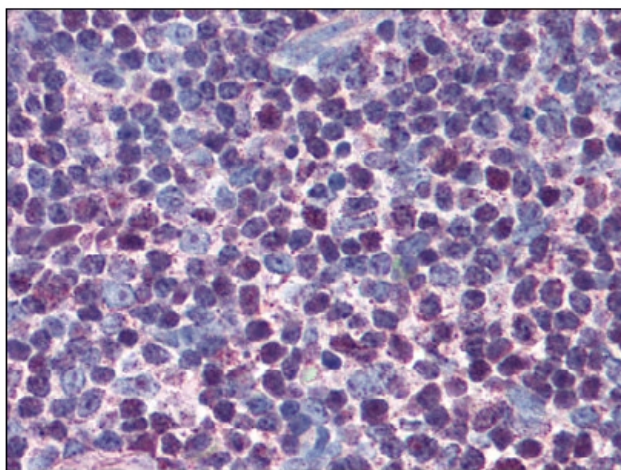
CASP-3, CASP3, CPP32, CPP-32, Yama protein, Apopain, SCA-1, SCA1

**Product images:**

Western blot analysis of Caspase-3 in HeLa cells. The antibody detected both pro (full-length) and active (cleaved) Caspase-3, depending on the treatment time points.



Western blot analysis of Caspase-3 in multiple human tissues. The tissues shown are A) brain, B) heart, C) intestine, D) kidney, E) liver, F) lung, G) muscle, H) stomach, I) spleen, J) ovary, and K) testis. Lanes 1, 2 and 3 demonstrate the species crossreactivity of the antibody in Human, Mouse and Rat heart lysate, respectively.



Caspase-3 antibody staining of Formalin-Fixed Paraffin-Embedded Human Thymus at 5 ug/ml followed by biotinylated anti-mouse IgG secondary antibody, alkaline phosphatase-streptavidin and chromogen.