

# PRODUCT INFORMATION



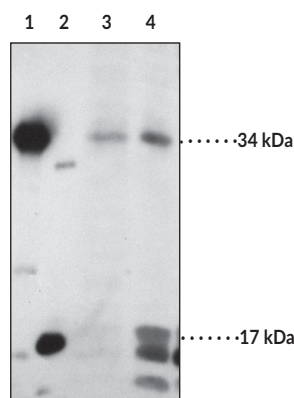
## Caspase-3 (human) Polyclonal Antibody

Item No. 160745

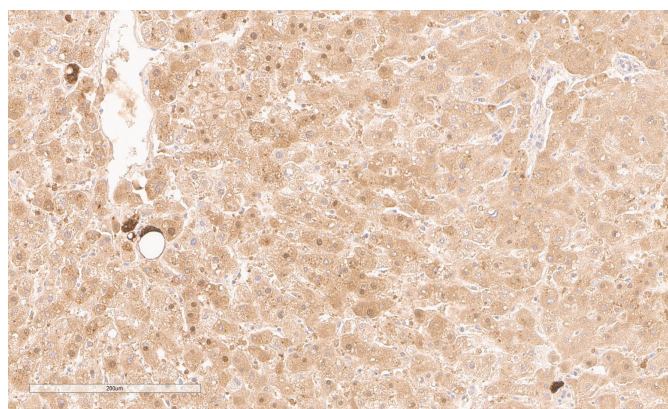
### Overview and Properties

|                            |  |
|----------------------------|--|
| <b>Contents:</b>           | This vial contains 500 µl peptide affinity-purified polyclonal antibody.   |
| <b>Synonyms:</b>           | Apopain; CPP32; ICE3; Yam  |
| <b>Immunogen:</b>          | Synthetic peptide from an internal region of human caspase-3   |
| <b>Cross Reactivity:</b>   | (+) Recognizes both the proform and active subunits of caspase-2   |
| <b>Species Reactivity:</b> | (+) Human, baboon, hamster, and mouse ; other species not tested   |
| <b>Uniprot No.:</b>        | P42574   |
| <b>Form:</b>               | Lyophilized  |
| <b>Storage:</b>            | -20°C (as supplied)  |
| <b>Stability:</b>          | ≥3 years   |
| <b>Storage Buffer:</b>     | TBS, pH 7.4  |
| <b>Host:</b>               | Rabbit   |
| <b>Applications:</b>       | Western blot (WB) and immunohistochemistry (IHC) of formalin-fixed paraffin embedded tissue; the recommended starting dilution is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically |

### Images



Lane 1: Recombinant human pro-caspase-3 (5 ng)  
Lane 2: Recombinant human caspase-3 (active) (5 ng)  
Lane 3: HeLa lysate (75 µg)  
Lane 4: Jurkat lysate (75 µg)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human liver tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with Caspase-3 (human) Polyclonal Antibody (Item No. 160745) at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
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## Description

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Apoptosis is associated with many diseases and is induced by a family of cell death receptors and their ligands. Cell death signals are transduced by death domain containing adapter molecules and members of the caspase family of proteases. Caspase-3 is a key effector caspase in the apoptosis cascade.<sup>1,2</sup> The enzyme is efficiently activated by caspase-8, caspase-9, and granzyme B resulting in 17 and 12 kDa active subunits formed from the 34 kDa proenzyme.<sup>1,3</sup> The substrates of caspase-3 are numerous and include pro- and anti-apoptotic proteins, downstream components of the apoptotic machinery (for example, ICAD), as well as structural and homeostatic proteins.<sup>1,2</sup> DNA fragmentation and the morphological changes associated with this final stage of apoptosis appears to be dependent upon caspase-3.<sup>4</sup> Caspase-3 is expressed in a variety of tissues and cells.<sup>3,5</sup>

## References

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1. Wolf, B.B. and Green, D.R. Suicidal tendencies: Apoptotic cell death by caspase family proteinases. *J. Biol. Chem.* **274**(29), 20049-20052 (1999).
2. Villa, P., Kaufman, S.H., and Earnshaw, W.C. Caspases and caspase inhibitors. *Trends Biochem. Sci.* **22**(10), 388-393 (1997).
3. Fernandes-Alnemri, T., Litwack, G., and Alnemri, E.S. 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**(49), 30761-30764 (1994).
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