Caspase-3 (human), (recombinant) (active)

Highly active caspase essential for apoptosis

Caspase-3 is a member of the interleukin-1β converting enzyme (ICE) family of cysteine proteases. It exists in cells as an inactive 32kDa proenzyme. During apoptosis procaspase-3 is processed at aspartate residues by self-proteolysis and/or cleavage by upstream caspases, such as caspase-6, caspase-8 and granzyme B. The processed form of caspase-3 consists of large (17kDa) and small (11kDa) subunits which associate to form the active enzyme. Active caspase-3 has been shown involved in the proteolysis of several important molecules, such as poly(ADP-ribose) polymerase (PARP), the sterol regulatory element binding proteins (SREBPs), focal adhesion kinase (FAK) and others.

Citations: 17 View Online »

Ordering Information

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ALX-201-059-U025	25U
ALX-201-059-U100	100U

Manuals, SDS & CofA

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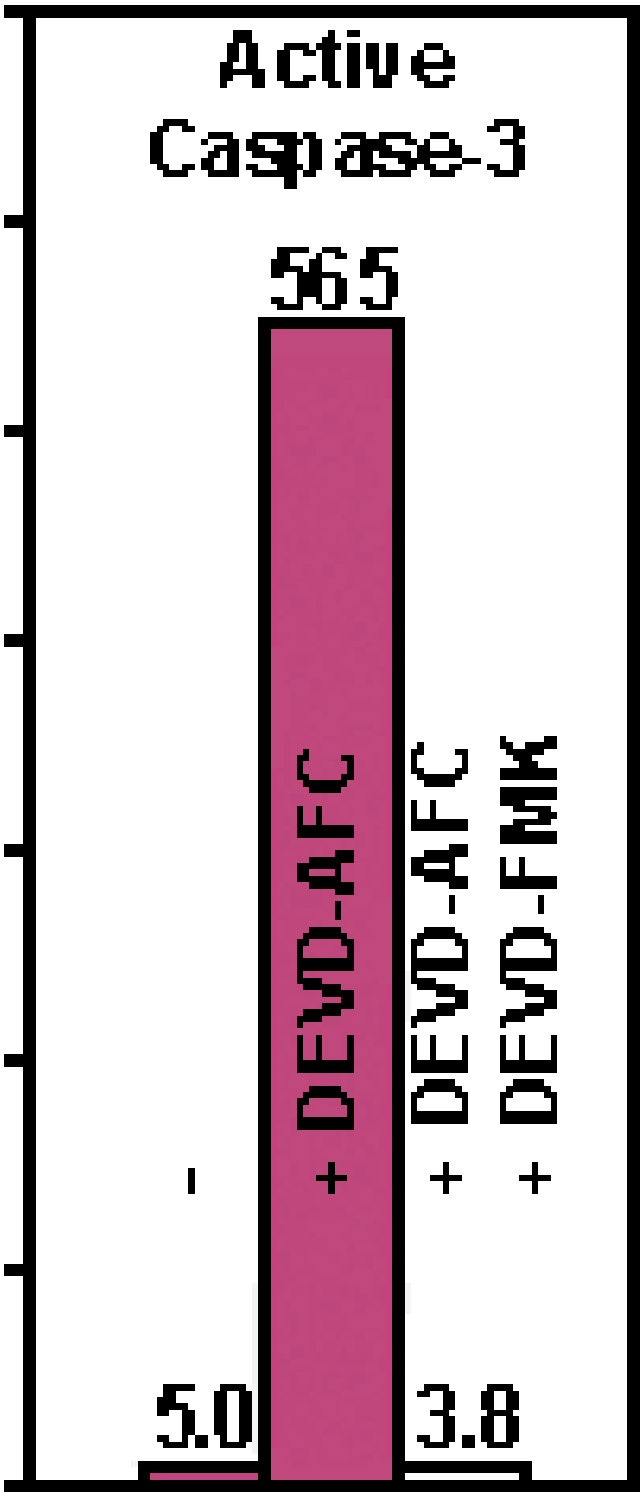

Figure: Active human caspase was expressed in *E. coli* and purified. The activity of recombinant caspase-3 was determined by cleaving AFC conjugates of DEVD. The cleavage activity was effectively inhibited by the corresponding peptide inhibitor as indicated.

Handling & Storage

Handling	Avoid freeze/thaw cycles. After reconstitution, prepare aliquots and store at -80°C.
Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	CPP32, Yama, Apopain
Application Notes	Useful in studying enzyme regulation, determining target substrate, screening caspase inhibitors, or as a positive control in caspase assays. We recommend using 1 unit per assay for analyzing caspase activity. For a complete caspase-3 assay protocol, please refer to Caspase-3 Fluorometric or Colorimetric Assay Kits (Prod. No. ALX-850-216 or ALX-850-215).
Formulation	Lyophilized.
Quality Control	Routinely tested for its ability to cleave the caspase-3 substrates Ac-DEVD-*p*NA (Prod. No. ALX-260-033) and Ac-DEVD-AFC (Prod. No. ALX-260-032).
Reconstitution	Reconstitute to 1U/µl in water.
Source	Produced in *E. coli*. Contains an N-terminal His-tag.
Specific Activity	≥15,000 U/mg protein. One unit is defined as the amount of enzyme that cleaves 1nmol of the caspase substrate DEVD-*p*NA (Prod. No. ALX-260-033) per hour at 37°C in a reaction solution containing 50mM HEPES, pH 7.2, 50mM NaCl, 0.1% CHAPS, 10mM EDTA, 5% glycerol and 10mM DTT.
UniProt ID	P42574

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