

Active Recombinant Human Caspase-3

CATALOG NO:	1083-25	25 units
	1083-100	100 units
	1083-5	5 µg
	1083-10	10 µg

UNIT DEFINITION:

One unit of the recombinant caspase-3 is the enzyme activity that cleaves 1 nmol of the caspase substrate DEVD-pNA (pNA: p-nitroaniline) per hour at 37° C in a reaction solution containing 50 mM Hepes, pH 7.2, 50 mM NaCl, 0.1% Chaps, 10 mM EDTA, 5% Glycerol, and 10 mM DTT.

FORM: Freeze-dried powder with additives

RECONSTITUTION: Reconstitute to 1 unit per µl in water.

SPECIFIC ACTIVITY: ≥ 15,000 units/mg

STORAGE CONDITIONS:

The lyophilized caspase-3 is stable for 1 year at -70° C. Following reconstitution in water, the enzyme should be aliquoted and immediately stored at -70° C. Avoid multiple freeze/thaw cycles as activity might decrease.

DESCRIPTION:

Caspase-3 (also known as CPP32, Yama and apopain) is a major member of the caspase-family of cysteine proteases. Caspase-3 exists in cells as an inactive 32 kDa proenzyme. During apoptosis procaspase-3 is processed at aspartate residues by self-proteolysis and/or cleavage by upstream caspases, such as caspase-6 (Mch2), caspase-8 (Flice) and granzyme B. The processed form of caspase-3 consists of large (17 kD) and small (11 kD) subunits which associate to form the active enzyme. The active caspase-3 has been shown involving 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. The recombinant active human caspase-3 expressed in *E. coli* spontaneously undergoes auto processing to yield subunits characteristic of the native enzyme (Full length gene Accession No. NP_004337). The active caspase-3 preferentially cleaves caspase-3 substrates (e.g., DEVD-AFC or DEVD-pNA) and is routinely tested at BioVision for its ability to enzymatically cleave these two substrates Ac-DEVD-pNA (Cat. No. 1008-200) or Ac-DEVD-AFC (Cat. No. 1007-200).

APPLICATIONS AND USAGE:

Active caspase-3 is useful in studying enzyme regulation, determining target substrates, screening caspase inhibitors, or as a positive control in caspase activity assays. We recommend using 1 unit/assay for analyzing caspase activity.

For a complete caspase-3 assay protocol, please refer to BioVision's Caspase-3/ CPP32 Fluorometric or Colorimetric Assay Kits (Cat No: K105 and K106).

RELATED PRODUCTS:

- Caspase-1, human recombinant (Cat. No. 1081-25, -100)
- Caspase-2, human recombinant (Cat. No. 1082-25, -100)
- Caspase-3, mouse recombinant (Cat. No. 1183-25, -100)
- Caspase-3 Proform, mouse recombinant (Cat. No. 1183P-5)
- Caspase-3, rat recombinant (Cat. No. 1283-25, -100)
- Caspase-4, human recombinant (Cat. No. 1084-25, -100)
- Caspase-5, human recombinant (Cat. No. 1085-25, -100)
- Caspase-6, human recombinant (Cat. No. 1086-25, -100)
- Caspase-7, human recombinant (Cat. No. 1087-25, -100)
- Caspase-8, human recombinant (Cat. No. 1088-25, -100)
- Caspase-8, mouse recombinant (Cat. No. 1188-25, -100)
- Caspase-9, human recombinant (Cat. No. 1089-25, -100)
- Caspase-9 Proform, human recombinant (Cat. No. 1089P-50)
- Caspase-10/a, human recombinant (Cat. No. 1090A-25, -100)
- Caspase-10/b, human recombinant (Cat. No. 1090B-25, -100)
- Active Human Caspases Group I (Cat. No. K241-3-25)
- Active Human Caspases Group II (Cat. No. K242-3-25)
- Active Human Caspases Group III (Cat. No. K243-3-25)
- Active Human Caspases Set I (Cat. No. K230-4-25)
- Active Human Caspases Set II (Cat. No. K231-4-25)
- Active Human Caspases Set III (Cat. No. K232-4-25)
- Active Human Caspases Set IV (Cat. No. K233-4-25)

FOR RESEARCH USE ONLY! Not to be used in humans.