

Active Recombinant Mouse Caspase-1

CATALOG NO: 1181-25 25 units
1181-100 100 units

UNIT DEFINITION:

One unit of the recombinant caspase-1 is the enzyme activity that cleaves 1 nmol of the caspase substrate Ac-YVAD-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: Lyophilized

RECONSTITUTION: Reconstitute to 1 unit per µl in PBS containing 15% glycerol.

SPECIFIC ACTIVITY: >2000 units/mg

STORAGE CONDITIONS:

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

DESCRIPTION:

Caspase-1 (also known as ICE) is a prototypical member of the caspase-family of cysteine proteases. Caspase-1 exists in cells as an inactive 45 kDa proenzyme. The pro-enzyme is matured by proteolysis to yield large (20 kD) and small (10 kD) subunits. The active caspase-1 is a heterotetramer consisting of two large and two small subunits. To date the regulatory mechanism of caspase-1 activation and the role of caspase-1 in apoptosis are poorly understood. In THP-1 cells, a large proportion of the caspase-1 is present in the inactive proenzyme form.

The recombinant active mouse caspase-1 was expressed in *E. coli*. The protein contains about 284 aa without propeptide and fused with HIS tag at N-terminus. The active caspase-1 preferentially cleaves caspase-1 substrates (e.g., YVAD-AFC or YVAD-pNA) and is routinely tested at BioVision for its ability to enzymatically cleave these two substrates Ac-YVAD-pNA (Cat. #1104-200) or Ac-YVAD-AFC (1103-200).

APPLICATIONS AND USAGE:

Active caspase-1 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-1 assay protocol, please refer to BioVision's Caspase-1 Fluorometric or Colorimetric Assay Kits (Cat.#: K110 and K111).

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

RELATED PRODUCTS:

- Caspase-1, human recombinant (Cat. No. 1081-25, -100)
- Caspase-2, human recombinant (Cat. No. 1082-25, -100)
- Caspase-3, human recombinant (Cat. No. 1083-5, -10, -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)