

Active Recombinant Human Caspase-1

CATALOG #: 1081-25 25 units
1081-100 100 units

LOT #: _____

UNIT DEFINATION:

One unit of the recombinant caspase-1 is the enzyme activity that cleaves 1 nmol of the caspase substrate YVAD-pNA (pNA: p-nitroanaline) 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 powder

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

SPECIFIC ACTIVITY: 20000 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 know 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 human caspase-1 was expressed in *E. coli*. 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).

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- Caspase Assay Kits & Reagents
- Mitochondrial Apoptosis Kits & Reagents
- Nuclear Apoptosis Kits & Reagents
- Apoptosis Inducers and Set
- Apoptotic Cell Isolation Kit

Cell Fractionation System

- Mitochondria/Cytosol Fractionation Kit
- Nuclear/Cytosol Fractionation Kit
- Membrane Protein Extraction Kit
- Cytosol/Particulate Rapid Separation Kit
- Mammalian Cell Extraction Kit
- FractionPREP Fractionation System

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- Senescence Detection Kit
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- PLTP Activity Assay Kit
- Total Cholesterol Quantification Kit

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- Cloning Insert Quick Screening Kit
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