

## Active Recombinant Human Caspase-2

**CATALOG #:** 1082-25 25 units  
1082-100 100 units

**LOT #:** \_\_\_\_\_

### UNIT DEFINITION:

One unit of the recombinant caspase-2 is the enzyme activity that cleaves 1 nmol of the caspase substrate VDVAD-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 powder

**RECONSTITUTION:** Reconstitute to 1 unit per  $\mu$ l in PBS containing 15% glycerol.

**SPECIFIC ACTIVITY:** 10,000 – 13,000 units/mg

**PURITY:**  $\geq$ 95% by SDS-PAGE

### STORAGE CONDITIONS:

The lyophilized caspase-2 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-2 (also known as Ich-1, Nedd-2) is a member of the caspase-family of cysteine proteases. Similar to other caspases, caspase-2 also exists in cells as an inactive proenzyme. During apoptosis pro-caspase-2 is processed at aspartate residues by self-proteolysis and/or cleavage by upstream caspases. The processed active caspase-2 is a heterotetramer consisting of two large (19 kDa) and two small (12 kDa) subunits.

The recombinant active human caspase-2 was expressed in *E. coli*. The active caspase-2 preferentially cleaves caspase-2 substrates (e.g., VDVAD-AFC or VDVAD-pNA) and is routinely tested at BioVision for its ability to enzymatically cleave these two substrates AcVDVAD-pNA (Cat. #1072-200) or AcVDVAD-AFC (1071-200).

### APPLICATIONS AND USAGE:

Active caspase-2 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-2 assay protocol, please refer to BioVision's Caspase-2 Fluorometric or Colorimetric Assay Kits (Cat.#: K116 and K117).

### RELATED PRODUCTS:

#### Apoptosis Detection Kits & Reagents

- Annexin V Kits & Bulk Reagents
- 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

#### Cell Proliferation & Senescence

- Quick Cell Proliferation Assay Kit
- Senescence Detection Kit
- High Throughput Apoptosis/Cell Viability Assay Kits
- LDH-Cytotoxicity Assay Kit
- Bioluminescence Cytotoxicity Assay Kit
- Live/Dead Cell Staining Kit

#### Cell Damage & Repair

- HDAC Fluorometric & Colorimetric Assays & Drug Discovery Kits
- HAT Colorimetric Assay Kit & Reagents
- DNA Damage Quantification Kit
- Glutathione & Nitric Oxide Fluorometric & Colorimetric Assay Kits

#### Signal Transduction

- cAMP & cGMP Assay Kits
- Akt & JNK Activity Assay Kits
- Beta-Secretase Activity Assay Kit

#### Adipocyte & Lipid Transfer

- Recombinant Adiponectin, Survivin, & Leptin
- CETP Activity Assay & Drug Discovery Kits
- PLTP Activity Assay Kit
- Total Cholesterol Quantification Kit

#### Molecular Biology & Reporter Assays

- siRNA Vectors
- Cloning Insert Quick Screening Kit
- Mitochondrial & Genomic DNA Isolation Kits
- 5 Minutes DNA Ligation Kit
- 20 Minutes Gel Staining/Destaining Kit
- $\beta$ -Galactosidase Staining Kit & Luciferase Reporter Assay Kit

#### Growth Factors and Cytokines

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