

## Active Recombinant Caspases Group III

**CATALOG #:** K243-4-25

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

### PACKAGE CONTENT:

Description	Amount	Cap Color	Part Number
Recombinant Caspase-6	25 units	Violet	1086-25
Recombinant Caspase-8	25 units	Green	1088-25
Recombinant Caspase-9	25 units	Blue	1089-25
Recombinant Caspase-10	25 units	Amber	1090A-25

**FORM:** Lyophilized powder

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

### UNIT DEFINITION:

One unit of the active recombinant caspase-6, -8, -9 & -10 is the enzyme activity that cleaves 1 nmol of the caspase substrate VEID-pNA (for caspase-6), IETD-pNA (for caspase-8 & -10), and LEHD-pNA (for caspase-9), respectively, 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.

### STORAGE CONDITIONS:

The lyophilized recombinant caspases are stable for 1 year at  $-70^{\circ}\text{C}$ . Following reconstitution in PBS, these enzymes should be aliquoted and stored at  $-70^{\circ}\text{C}$ . Avoid multiple freeze/thaw cycles as activity might decrease.

### SCIENTIFIC BACKGROUND:

Caspase family consists of more than 10 members. Based on their extended substrate specificities, these enzymes were divided into three major groups: Group I (contains caspase-1, -4, -5), Group II (contains caspase-2, -3, -7), and Group III (contains caspase-6, -8, -9, -10). Evidence has suggested that Group I caspases are involved primarily in the production of inflammatory cytokines, while group II and III enzymes function in apoptosis as effectors and upstream activators, respectively. The Group III recombinant caspases were expressed in *E. coli* and are routinely tested for their ability to enzymatically cleave the substrate VEID-pNA (for caspase-6), IETD-pNA (for caspase-8 & -10) and LEHD-pNA (for caspase-9), respectively.

### APPLICATIONS AND USAGE:

Active recombinant caspases are useful for screening caspase inhibitors, studying enzyme kinetics and regulation, determining target substrates, and as positive controls in caspase activity assays. We recommend using 1 unit per assay for analyzing caspase activity.

For a complete caspase activity assay protocol, please refer to BioVision's Fluorometric or Colorimetric Caspase Assay Kits.

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

### 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 Fluorometric & Colorimetric Assay Kits
- 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 & Drug Discovery Kits
- Total Cholesterol Quantification Kit

#### Molecular Biology & Reporter Assays

- siRNA Apoptosis and Cloning Vectors
- Cloning Insert Quick Screening Kit
- Mitochondrial & Genomic DNA Isolation Kits
- 5 Minutes DNA Ligation Kit
- 20 Minutes Gel Staining/Destaining Kit

#### Growth Factors and Cytokines

Antibodies to Apoptosis and Cell Signaling Molecules