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HUMAN CASPASE-3 (ACTIVE) RECOMBINANT PROTEIN

CATALOG NUMBER: CC119

LOT NUMBER:

QUANTITY: 25 units* at 1 unit/μL

* Where one unit of the recombinant caspase-3 is the enzyme activity that cleaves 1 nmol of the caspase substrate DEVD-pNA (pNA: pnitroanaline) per hour at 37°C at saturated substrate concentrations.

SPECIFICITY: Caspase-3 (also known as CPP32, Yama and apopain) is a member of the interleukin-1β converting enzyme (ICE) 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) granzyme B. The processed form of caspase-3 consists of large (17 kDa) and small (11 kDa) 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 partially purified* active recombinant human caspase-3 protein with full-length His-6 tag was expressed in *E. coli*. The expressed Caspase-3 spontaneously undergoes autoprocessing to yield the subunits characteristic of the native enzyme. The recombinant caspase-3 preferentially cleaves caspase-3 substrates (e.g., DEVD-AFC or DEVD-pNA). In combination with caspase-3 activity assays, the active recombinant caspase-3 is very useful in the biological screening of caspase inhibitors. The recombinant enzyme can also be used as a positive control in caspase assays or in determining the specificity of caspase substrates.

*10-25% caspase-3 protein by gel analysis, also contains *E. coli* proteins. Approximately, 0.8-2 μg total protein / unit of activity. GenBank # U13737.

PRESENTATION: Lyophilized. Reconstitute to 1 unit/μL with PBS containing 15% glycerol.

STORAGE/HANDLING: Maintain at -70°C in undiluted aliquots for 3-6 months. Avoid repeated freeze/thaw cycles.

Important Note: *During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 μL or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.*

FOR RESEARCH USE ONLY; NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR HUMAN OR ANIMAL CONSUMPTION

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