

## Human Caspase 3 protein, His tag

Cat. No. GTX00207-pro

**Applications** Functional Assay**Species** Human**Package**

10 µg

## Applications

## Application Note

Caspase 3 is a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes that undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. This protein cleaves and activates caspases 6 and 7; and the protein itself is processed and activated by caspases 8, 9, and 10. Caspase 3 can hydrolyze the peptide substrate acetyl-Asp-Glu-Val-Asp-p-nitroanilide (Ac-DEVD-pNA) resulting in the release of the p-nitroaniline (pNA) moiety. p-Nitroaniline has a high absorbance at 405nm. Thus the activity of recombinant human caspase 3 can be measured by calculate the concentration of the pNA released from the substrate. The reaction was performed in adding 50 µl 2×buffer (50 mM HEPES, 100 mM NaCl, 10 mM DTT, 2 mM EDTA, 10% glycerol) to 96 well plates, then add 50 µl various concentration of caspe 3 (diluted by 1×buffer, 25 mM HEPES, 50 mM NaCl, 5 mM DTT, 1 mM EDTA, 5% glycerol) to each well, finally, add 5µl 4mmol Ac-DEVD-pNA to each well. Cover the 96 well plates and incubate at 37°C for 2h. p-Nitroaniline (pNA) standard curve prepare by double dilute 200µM pNA with 1×buffer and record the OD value at 405nm. Calculate the caspase 3 activity in pmol of pNA released per min per µg recombinat human caspase 3. The specific activity of recombinant human caspase 3 is 2196 pmol/min/µg.

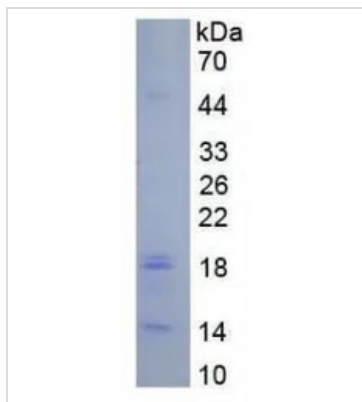
**Observed MW (kDa)** 14/18/20 kDa.

## Properties

**Form** Lyophilized powder**Buffer** Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose.**Preservative** ProClin 300**Storage** For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.**Region/Sequence** N-terminal His-Tag; Ser29~His277 (NP\_004337.2)**Expression System** E. coli**Purity** > 90%**Endotoxin** < 1 EU/µg**Conjugation** Unconjugated**Note** For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

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## DATA IMAGES

**GTX00207-pro Image**

SDS-PAGE analysis of GTX00207-pro Human Caspase 3 protein.



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