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## Product Datasheet

### Human Caspase 3 protein, His tag, Unconjugated GTX00207-PRO

Article Name	Human Caspase 3 protein, His tag, Unconjugated
Biozol Catalog Number	GTX00207-PRO
Supplier Catalog Number	GTX00207-pro
Alternative Catalog Number	GTX00207-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Human
Conjugation	Unconjugated
NCBI	<a href="#">836</a>
UniProt	p42574
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, ProClin 300.
Expression System	E. coli
Form	Lyophilized powder
Sequence	N-terminal His-Tag, Ser29~His277 (NP_004337.2)

#### Application Notes

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  $\mu$ l 2\*buffer (50 mM HEPES, 100 mM NaCl, 10 mM DTT, 2 mM EDTA, 10% glycerol) to 96 well plates, then add 50  $\mu$ l 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 5 $\mu$ l 4mmol Ac-DEVD-pNA to each well. Cover the 96 well plates and incubate at 37C for 2h. p-Nitroaniline (pNA) standard curve prepare by double dilute 200 $\mu$ M pNA with 1\*buffer and record the OD value at 405nm. Calculate the caspase 3 activity in pmol of pNA released per min per  $\mu$ g recombinat human caspase 3. The specific activity of recombinant human caspase 3 is 2196 pmol/min/ $\mu$ g.