Creative Enzymes®

caspase-3

Cat. No. EXWM-4231

Lot. No. (See product label)

Introduction

Description	Caspase-3 is an effector/executioner caspase, as are caspase-6 (EC 3.4.22.59) and caspase-7 (EC 3.4.22.60). These caspases are responsible for the proteolysis of the majority of cellular polypeptides [e.g. poly(ADP-ribose) polymerase (PARP)], which leads to the apoptotic phenotype. Procaspase-3 can be activated by caspase-1 (EC 3.4.22.36), caspase-8 (EC 3.4.22.61), caspase-9 (EC 3.4.22.62) and caspase-10 (EC 3.4.22.63) as well as by the serine protease granzyme B. Caspase-3 can activate procaspase-2 (EC 3.4.22.55). Activation occurs by inter-domain cleavage followed by removal of the N-terminal prodomain. Although Asp-Glu-(Val/Ile)-Asp is thought to be the preferred cleavage sequence, the enzyme can accommodate different residues at P2 and P3 of the substrate. Like caspase-2, a hydrophobic residue at P5 of caspase-3 leads to more efficient hydrolysis, e.g. (Val/Leu)-Asp-Val-Ala-Asp┼ is a better substrate than Asp-Val-Ala-Asp┼. This is not the case for caspase-7. Belongs in peptidase family C14.
Synonyms	CPP32; apopain; yama protein

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 3.4.22.56
CAS No.	169592-56-7
Reaction	Strict requirement for an Asp residue at positions P1 and P4. It has a preferred cleavage sequence of Asp-Xaa-Xaa-Asp┼ with a hydrophobic amino-acid residue at P2 and a hydrophilic amino-acid residue at P3, although Val or Ala are also accepted at this position
Notes	This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage	Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.