CALPAIN 1 ACTIVE
from Human Plasma

Product Number C 6108
Storage Temperature -70 °C

EC 3.4.22.17

Product Description
This product is an active form of Calpain 1 from human plasma. It is a neutral calcium-dependent cysteine protease containing the EF-hand motif. The protease consists of two subunits; the larger subunit has four domains, one homologous with papain and one with calmodulin. The smaller subunit has one domain homologous with calmodulin. In vivo, the enzyme is usually present in an inactive form and found mainly in the cell cytosol.

Calpain 1 is activated by limited autolysis in the presence of calcium. It requires micromolar levels of calcium for activation and, therefore, it is often referred to as micro-calcain, or μ-calpain. Calpain 2 is activated by millimolar levels of calcium and referred to as milli-calpain, or m-calpain. Activation of Calpain 1 leads to cellular protein degradation, neuronal cell degeneration, and autoimmune demyelinating diseases such as multiple sclerosis. It functions as an upstream regulator of apoptosis.

Solution in 20 mM imidazole-HCl, containing 5 mM β-mercaptoethanol, 1 mM EDTA, 1 mM EGTA, and 30% glycerol.

Purity: ≥98% (SDS-PAGE)

Precautions and Disclaimer
This product is for laboratory use only. Please consult the Material Data Safety Sheet for information regarding hazards and safe handling practices.

Storage/Stability
The product ships on dry ice and it is recommended to store the product at -70 °C. Avoid repeated freeze-thaw cycles.

References