Z-Leu-Leu-Tyr Fluoromethyl Ketone

Product Number C 9234
Storage Temperature −20 °C

Product Description
Molecular Formula: C_{30}H_{40}F_{3}N_{3}O_{6}
Formula Weight: 557.7

Z-Leu-Leu-Tyr Fluoromethyl Ketone (Z-LLY-FMK, Z = benzyloxy carbonyl) is an inhibitor of both Calpain and Cathepsin L.

Calpains are cystolic calcium-activated neutral proteases involved in cell apoptosis.\(^1\) Cathepsin L is a lysosomal cysteine protease involved in intracellular protein degradation.\(^2\)

The related inhibitor Z-LLY-diazomethyl ketone inactivated a calpain-like protease and prevented WI-38 human fibroblasts cells from going into the S-phase during serum-stimulated growth.\(^3\)

FMK is a trapping group responsible for irreversible inhibition but is non-cytotoxic. Inhibition occurs when the FMK group covalently bonds to the −SH of an adjacent cysteine residue on the target protein.

Preparation Instructions
Prepare stock 20 mM solutions in dry (≥ 99.9 %) DMSO to maintain product stability. Also soluble in DMF.

Storage/Stability
Store at −20 °C. The product is reported to be stable at room temperature for one year in a desiccator.

Store stock solutions at −20 °C for 6-8 months. Allowing the material to warm to room temperature before use to ensure stability.

References

RJM/jwm 11/01

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