Boc-Asp(OMe) Fluoromethyl Ketone

Product Number B 2682
Storage Temperature –20 °C

CAS #: 187389-53-3

Product Description
Molecular Formula: C₁₁H₁₈NO₅F
Molecular Weight: 263.3

Boc-Asp(OMe) Fluoromethyl Ketone is the methylated, cell permeable derivative of the caspase inhibitor Boc-Asp Fluoromethylketone (Boc-D-FMK).

Boc-D-FMK is a potent irreversible pancaspase inhibitor.¹² It can inhibit most, if not all, known caspases. Caspases are a group of cysteine aspartate proteases, that play a role in apoptosis.³⁴ At least 14 different caspases have been identified which differ in their substrate specificities.

Methylation of the acidic amino acid Asp enhances the cell membrane permeability of Boc-D-FMK. Once in the cell, endogenous esterase activity hydrolyzes the methyl group to form the biological active form. For in vitro studies an esterase needs to be included in the reaction mix to generate the active form of the molecule.

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

BOC-Asp(OMe) Fluoromethyl Ketone is supplied as an off-white semi-solid.

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

Storage/Stability
Store at –20 °C. The product is stable at room temperature for one year in a desiccator. Allow container to warm to room temperature before opening to ensure stability.

Store stock solutions at –20 °C for 6-8 months.

References

BD 08/01