Z-Ala-Ser-Thr-Asp(OMe) Fluoromethyl Ketone

Product Number C 9359
Storage Temperature –20 °C

Product Description
Molecular Formula: C_{24}H_{32}FN_{4}O_{10}
Molecular Weight: 555.5

Z-Ala-Ser-Thr-Asp(OMe)-Fluoromethyl Ketone is the methylated, cell-permeable derivative of caspase-7 inhibitor Z-Ala-Ser-Thr-Asp-FMK (Z-ASTD-FMK, Z = benzyloxycarbonyl).

Caspase-7 has been implicated in the cleavage of proendothelial monocyte-activating polypeptide II (proEMAP II) to EMAP II in apoptotic cells.\textsuperscript{1,2} EMAP II is a proinflammatory cytokine capable of stimulating the chemotactic migration of monocytes and neutrophils as well as activating endothelial cells and monocytes to become macrophages.

Methylation of the acidic amino acid Asp enhances the cell membrane permeability of Z-ASTD-FMK. Once in the cell endogenous esterase activity hydrolyzes the methyl groups to form the biological active form. For \textit{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, but is non-cytotoxic. Inhibition occurs when the 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 (\geq 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.

Stock solutions can be stored at –20 °C for 6-8 months.

References

ZWD 11/01