

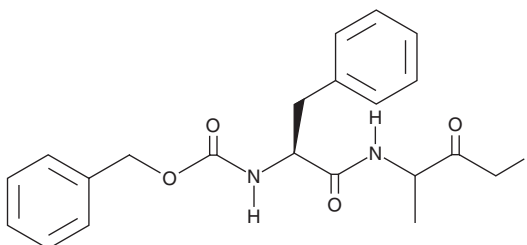
PRODUCT INFORMATION



Z-FA-FMK

Item No. 14462

CAS Registry No.: 197855-65-5
Formal Name: N-[(1S)-2-[(3-fluoro-1-methyl-2-oxopropyl)amino]-2-oxo-1-(phenylmethyl)ethyl]-carbamic acid, phenylmethyl ester
Synonym: Z-Phe-Ala-Fluoromethyl Ketone
MF: C₂₁H₂₃FN₂O₄
FW: 386.4
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Z-FA-FMK is supplied as a A crystalline solid. A stock solution may be made by dissolving the A crystalline solid in the solvent of choice, which should be purged with an inert gas. A crystalline solid is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of Z-FA-FMK in these solvents is approximately 5 mg/ml.

Description

Z-FA-FMK is an irreversible inhibitor of cysteine proteases, including cathepsins B, L, and S, cruzain, and papain.¹ It also inhibits effector caspases-2, -3, -6, and -7 (IC₅₀ = 6-32 μM) without affecting the initiator caspases-8 and -10.² Z-FA-FMK also modulates infection by certain bacteria, parasites, and viruses.³⁻⁵ It can be used both in cells and *in vivo*.^{4,5}

References

1. Ahmed, N.K., Martin, L.A., Watts, L.M., *et al.* Peptidyl fluoromethyl ketones as inhibitors of cathepsin B. Implication for treatment of rheumatoid arthritis. *Biochem. Pharmacol.* **44(6)**, 1201-1207 (1992).
2. Lopez-Hernandez, F.J., Ortiz, M.A., Bayon, Y., *et al.* Z-FA-fmk inhibits effector caspases but not initiator caspases 8 and 10, and demonstrates that novel anticancer retinoid-related molecules induce apoptosis via the intrinsic pathway. *Mol. Cancer Ther.* **2(3)**, 255-263 (2003).
3. Harth, G., Andrews, N., Mills, A.A., *et al.* Peptide-fluoromethyl ketones arrest intracellular replication and intercellular transmission of *Trypanosoma cruzi*. *Mol. Biochem. Parasitol.* **58(1)**, 17-24 (1993).
4. Lawrence, C.P., Kadioglu, A., Yang, A.L., *et al.* The cathepsin B inhibitor, z-FA-FMK, inhibits human T cell proliferation *in vitro* and modulates host response to pneumococcal infection *in vivo*. *J. Immunol.* **177(6)**, 3827-3836 (2006).
5. Kim, M., Hansen, K.K., Davis, L., *et al.* Z-FA-FMK as a novel potent inhibitor of reovirus pathogenesis and oncolysis *in vivo*. *Antivir. Ther.* **15(6)**, 897-905 (2010).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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