

PRODUCT INFORMATION



Z-L-Phe-CMK

Item No. 15225

CAS Registry No.: 26049-94-5
Formal Name: N-[(1S)-3-chloro-2-oxo-1-(phenylmethyl)propyl]-carbamic acid, phenylmethyl ester

Synonym: NSC 251810, SL 01, Z-L-Phe Chloromethyl Ketone, ZPCK

MF: C₁₈H₁₈ClNO₃

FW: 331.8

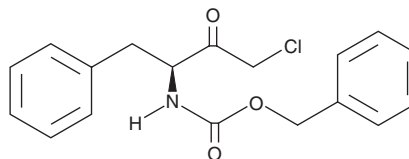
Purity: ≥98%

UV/Vis.: λ_{max}: 259 nm

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-L-Phe-CMK is supplied as a crystalline solid. A stock solution may be made by dissolving the SL 01 in the solvent of choice, which should be purged with an inert gas. Z-L-Phe-CMK is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Z-L-Phe-CMK in ethanol is approximately 2 mg/ml and approximately 33 mg/ml in DMSO and DMF.

Z-L-Phe-CMK is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Z-L-Phe-CMK should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Z-L-Phe-CMK has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Z-L-Phe-CMK is an inhibitor of severe acute respiratory syndrome coronavirus (SARS-CoV) main protease (M^{pro}), also known as 3C-like protease (3CL^{pro}; K_i = 306 nM).¹ It is selective for SARS-CoV M^{pro} over calpain, trypsin, and thrombin (K_is = 10, >100, and >100 μM, respectively). Z-L-Phe-CMK (20 μM) also inhibits the protein-protein interaction between p53 and MDM2 in U2OS osteosarcoma cells.² It has been used as a building block in the synthesis of HIV protease inhibitors.³

References

1. Bacha, U., Barrila, J., Velazquez-Campoy, A., *et al.* Identification of novel inhibitors of the SARS coronavirus main protease 3CL^{pro}. *Biochemistry* **43**(17), 4906-4912 (2004).
2. Li, J., Zhang, S., Gao, L., *et al.* A cell-based high-throughput assay for the screening of small-molecule inhibitors of p53-MDM2 interaction. *J. Biomol. Screen.* **16**(4), 450-456 (2011).
3. Maxson, T., Deane, C.D., Molloy, E.M., *et al.* HIV protease inhibitors block streptolysin S production. *ACS Chem. Biol.* **10**(5), 1217-1226 (2015).

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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