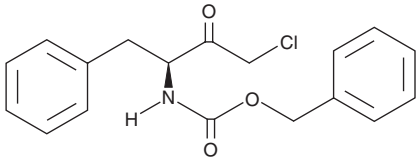
PRODUCT INFORMATION

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:	$C_{18}H_{18}ClNO_3$
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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM