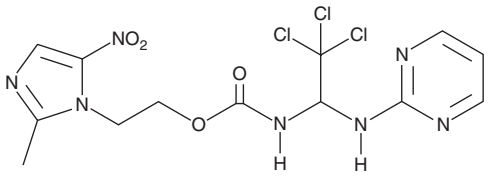
PRODUCT INFORMATION

Apcin

Item No. 17080

CAS Registry No.:	300815-04-7
Formal Name:	[2,2,2-trichloro-1-(2-pyrimidinylamino)ethyl]-carbamic acid, 2-(2-methyl-5-nitro-1H-imidazol-1-yl)ethyl ester
MF:	$C_{13}H_{14}Cl_3N_7O_4$
FW:	438.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 229, 304 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Apcin is supplied as a crystalline solid. A stock solution may be made by dissolving the apcin in the solvent of choice. Apcin is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of apcin in these solvents is approximately 25 mg/ml.

Apcin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, apcin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Apcin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Apcin is an inhibitor of the E3 ligase activity of the mitotic anaphase-promoting complex/cyclosome (APC/C). Apcin competitively binds to Cdc20 and prevents substrate interaction and ubiquitylation required for continuation of mitosis.[1] Apcin enhances the effect of the APC/C inhibitor N-4-tosyl-L-arginine methyl ester (TAME; Item No. 17550) and its prodrug, proTAME, leading to an increase in the number of cells in mitosis, a longer mitotic duration, and greater stabilization of cyclin B1, cycB1-NT, securin, and cyclin A2.[1] Apcin, in combination with proTAME, synergistically increases apoptosis in multiple myeloma cells.[2]

References

1. Sackton, K.L., Dimova, N., Zeng, X., *et al.* Synergistic blockade of mitotic exit by two chemical inhibitors of the APC/C. *Nature* **514(7524)**, 646-649 (2014).
2. Lub, S., Maes, A., De Veirman, K., *et al.* Inhibiting the anaphase promoting complex/cyclosome induces a metaphase arrest and cell death in multiple myeloma cells. *Oncotarget* **7(4)**, 4062-4076 (2016).

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