

# PRODUCT INFORMATION

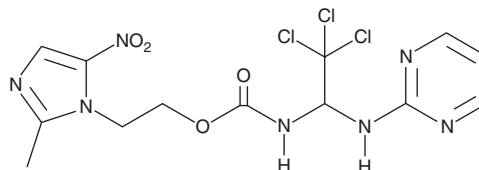


## Apcin

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<sub>13</sub>H<sub>14</sub>Cl<sub>3</sub>N<sub>7</sub>O<sub>4</sub>  
**FW:** 438.7  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 229, 304 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

Apcin is supplied as a crystalline solid. A stock solution may be made by dissolving the apcin in the solvent of choice, which should be purged with an inert gas. Apcin is soluble in organic solvents such as DMSO and dimethyl formamide. 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.<sup>1</sup> 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.<sup>1</sup> Apcin, in combination with proTAME, synergistically increases apoptosis in multiple myeloma cells.<sup>2</sup>

### 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).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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