

Lot # XXXXX

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MATERIAL DATA SHEET

Apcin, Cat. # I-444

Apcin (Anaphase Promoting Complex Inhibitor) is a cell-permeable compound capable of slowing APC-dependent proteolysis. Apcin functions by inhibiting substrate binding to Cdc20, the mitotic activator of the ubiquitin ligase activity of the anaphase-promoting complex/cyclosome (APC/C). The mechanism of action is distinct from that of another APC/C inhibitor, proTAME (I-440), which binds APC/C and inhibits both Cdc20- and Cdh1-dependent proteolysis. When used alone in cultured cells, apcin blocks mitotic exit only modestly. (concentrations of 50-100 μ M are required to slow mitotic exit). However, a strong synergistic effect is observed when apcin and proTAME are used simultaneously. Co-administration of the compounds provides a more robust mitotic arrest than would be predicted by additive models. This may be very beneficial when treating cells that do not efficiently convert proTAME to its active parent compound (TAME, tosyl-L-arginine methyl ester), or if experiments demand strong APC/C inhibition.

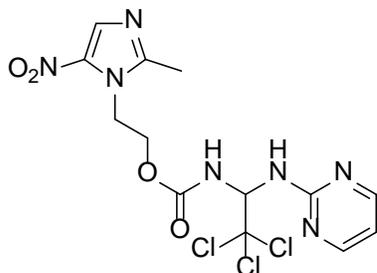
Product Information

Quantity: 5 mg

Formula: $C_{13}H_{14}Cl_3N_7O_4$

FW: 438.65

Structure:



Physical/Chemical Characteristics

Stock: Lyophilized powder

Solubility: Soluble in DMSO to ≥ 20 mM

Purity: $> 95\%$ by LC/MS and NMR data

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Use & Storage

Use: Optimal dose for each cell line needs to be established empirically, however we do not recommend the use of apcin as a single agent in most experimental designs. HeLa and hTERT-RPE1 cells are strongly arrested in mitosis when treated with a combination of proTAME (3-12 μ M) and apcin (25-50 μ M).

Storage: Store at -20°C. Avoid multiple freeze/thaw cycles.

Literature

References: Sackton K.L., *et al.* (2014) Nature doi:10.1038/nature13660
Zeng X., *et al.* (2010) Cancer Cell **18**: 382-395
Zeng X. and King R.W. (2012) Nature Chemical Biology **8**: 383-392

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