

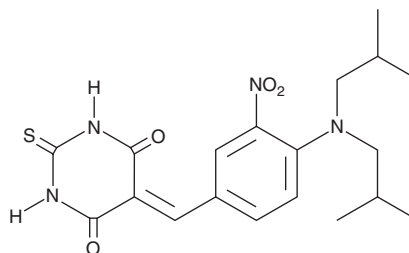
PRODUCT INFORMATION



M2I-1

Item No. 22297

CAS Registry No.: 312271-03-7
Formal Name: 5-[[4-[bis(2-methylpropyl)amino]-3-nitrophenyl]methylene]dihydro-2-thioxo-4,6(1H,5H)-pyrimidinedione
Synonym: Mad2 Inhibitor-1
MF: C₁₉H₂₄N₄O₄S
FW: 404.5
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 247, 272, 467 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

M2I-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the M2I-1 in the solvent of choice, which should be purged with an inert gas. M2I-1 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of M2I-1 in these solvents is approximately 25 mg/ml. M2I-1 is also slightly soluble in ethanol.

Description

M2I-1 is an inhibitor of the protein-protein interaction between the spindle assembly checkpoint protein mitotic arrest deficient 2 (Mad2) and cell division cycle 20 (Cdc20), a coactivator of the anaphase-promoting complex/cyclosome (APC/C).¹ It inhibits Mad2 binding to Cdc20¹¹¹⁻¹³⁸ when used at concentrations ranging from 6.25 to 100 μM. M2I-1 (25 μM) reduces increases in mitotic duration induced by paclitaxel (Item No. 10461) in HeLa cells. M2I-1 (20-120 μM) reduces 4-cell embryo and blastocyst formation in hydrogen peroxide-exposed mouse zygotes, as well as increases the rate of sex chromosome mosaicism in male mouse *in vitro* fertilization-derived embryos.²

References

1. Kastl, J., Braun, J., Prestel, A., *et al.* Mad2 inhibitor-1 (M2I-1): A small molecule protein-protein interaction inhibitor targeting the mitotic spindle assembly checkpoint. *ACS Chem. Biol.* **10**(7), 1661-1666 (2015).
2. Huang, Y., Ha, S., Li, Z., *et al.* CHK1-CENP B/MAD2 is associated with mild oxidative damage-induced sex chromosome aneuploidy of male mouse embryos during *in vitro* fertilization. *Free Radic. Biol. Med.* **137**, 181-193 (2019).

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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