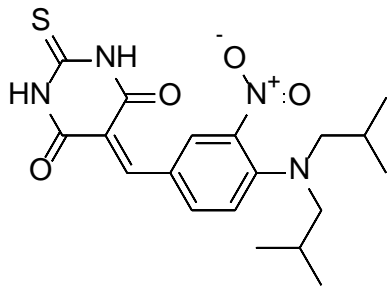


Product data sheet



| | |
|--|---|
| MedKoo Cat#: 406954 Name: M2I-1 CAS: 312271-03-7 Chemical Formula: C ₁₉ H ₂₄ N ₄ O ₄ S Exact Mass: 404.1518 Molecular Weight: 404.485 |  |
| Product supplied as: | Powder |
| Purity (by HPLC): | ≥ 98% |
| Shipping conditions | Ambient temperature |
| Storage conditions: | Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks. |

1. Product description:

M2I-1, also known as Mad2 Inhibitor-1, is Protein-Protein Interaction Inhibitor Targeting the Mitotic Spindle Assembly Checkpoint. M2I-1 disturbs conformational dynamics of Mad2 critical for complex formation with Cdc20. Cellular studies revealed that M2I-1 weakens the SAC response, indicating that the compound might be active in cells.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

| Solvent | Max Conc. mg/mL | Max Conc. mM |
|---------|-----------------|--------------|
| DMF | 25.0 | 61.81 |
| DMSO | 45.67 | 112.90 |

4. Stock solution preparation table:

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---------------------------------------|---------|----------|----------|
| 1 mM | 2.47 mL | 12.36 mL | 24.72 mL |
| 5 mM | 0.49 mL | 2.47 mL | 4.94 mL |
| 10 mM | 0.25 mL | 1.24 mL | 2.47 mL |
| 50 mM | 0.05 mL | 0.25 mL | 0.49 mL |

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Huang Y, Ha S, Li Z, Li J, Xiao W. 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.* 2019 Jun;137:181-193. doi: 10.1016/j.freeradbiomed.2019.04.037. Epub 2019 Apr 28. PMID: 31042615.
- Kastl J, Braun J, Prestel A, Möller HM, Huhn T, Mayer TU. Mad2 Inhibitor-1 (M2I-1): A Small Molecule Protein-Protein Interaction Inhibitor Targeting the Mitotic Spindle Assembly Checkpoint. *ACS Chem Biol.* 2015 Jul 17;10(7):1661-6. doi: 10.1021/acscchembio.5b00121. Epub 2015 May 15. PMID: 25978000.

In vivo study

TBD

7. Bioactivity

Biological target:

M2I-1 is a Mad2 inhibitor targeting the binding of Mad2 to Cdc20, an essential protein-protein interaction (PPI) within the spindle assembly checkpoint (SAC).

Product data sheet



In vitro activity

Under mild oxidative damage, abrogation of MAD2 by MAD2 inhibitor-1 (M2I-1) or CHK1 by siRNA microinjection increased sex chromosome mosaicism rate and reduced mitosis-promoting factor (MPF) activity.

Reference: Free Radic Biol Med. 2019 Jun;137:181-193. <https://pubmed.ncbi.nlm.nih.gov/31042615/>

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.