

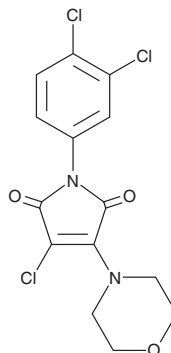
PRODUCT INFORMATION



RI-1

Item No. 24182

CAS Registry No.: 415713-60-9
Formal Name: 3-chloro-1-(3,4-dichlorophenyl)-4-(4-morpholinyl)-1H-pyrrole-2,5-dione
MF: C₁₄H₁₁Cl₃N₂O₃
FW: 361.6
Purity: ≥98%
UV/Vis.: λ_{max}: 255, 397 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

RI-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the RI-1 in the solvent of choice. RI-1 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of RI-1 in these solvents is approximately 2 and 13 mg/ml, respectively.

RI-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, RI-1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. RI-1 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

RI-1 is an irreversible inhibitor of RAD51 (IC₅₀s = 5-30 μM), a protein that is central to homologous recombination during DNA repair and is overexpressed in a wide range of human cancer cell types.^{1,2} RI-1 selectively inhibits homologous recombination without inhibiting single strand annealing.¹ It binds directly to the C319 thiol of RAD51 and inhibits oligomerization of RAD51 filaments. *In vitro*, RI-1 sensitizes cancer cells to chemotherapeutics that generate interstrand DNA crosslinks, including HEK293 cells co-treated with mitomycin C (LD₅₀ = 16.62 μM).^{1,2}

References

1. Budke, B., Logan, H.L., Kalin, J.H., *et al.* RI-1: A chemical inhibitor of RAD51 that disrupts homologous recombination in human cells. *Nucleic Acids Res.* **40(15)**, 7347-7357 (2012).
2. Budke, B., Kalin, J.H., Pawlowski, M., *et al.* An optimized RAD51 inhibitor that disrupts homologous recombination without requiring Michael acceptor reactivity. *J. Med. Chem.* **56(1)**, 254-263 (2013).

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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