

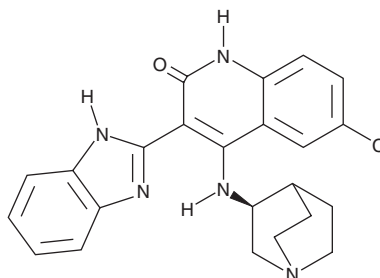
PRODUCT INFORMATION



CHIR124

Item No. 16553

CAS Registry No.: 405168-58-3
Formal Name: 4-[[[3S]-1-azabicyclo[2.2.2]oct-3-ylamino]-3-(1H-benzimidazol-2-yl)-6-chloro-2(1H)-quinolinone]
MF: C₂₃H₂₂ClN₅O
FW: 419.9
Purity: ≥95%
UV/Vis.: λ_{max}: 241, 288, 375 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

CHIR124 is supplied as a crystalline solid. A stock solution may be made by dissolving the CHIR124 in the solvent of choice, which should be purged with an inert gas. CHIR124 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of CHIR124 in these solvents is approximately 10 and 3 mg/ml, respectively.

Description

Checkpoint kinase 1 (Chk1) regulates S and G₂-M phase cell cycle checkpoints in response to DNA damage. CHIR124 is a cell-permeable, quinolone-based inhibitor of Chk1 (IC₅₀ = 0.3 nM *in vitro*).¹ It demonstrates high selectivity for Chk1 by displaying inhibitory values 2,000-fold higher against Chk2 (IC₅₀ = 0.7 μM).¹ In synergy with topoisomerase I poisons or ionizing radiation, CHIR124 can inhibit the growth of p53-mutant solid tumor cells both *in vitro* and in a xenograft model, potentiating tumor apoptosis.^{1,2}

References

1. Tse, A.N., Rendahl, K.G., Sheikh, T., *et al.* CHIR-124, a novel potent inhibitor of Chk1, potentiates the cytotoxicity of topoisomerase I poisons *in vitro* and *in vivo*. *Clin. Cancer Res.* **13(2 Pt 1)**, 591-602 (2007).
2. Tao, Y., Leteur, C., Yang, C., *et al.* Radiosensitization by Chir-124, a selective CHK1 inhibitor: Effects of p53 and cell cycle checkpoints. *Cell Cycle* **8(8)**, 1196-1205 (2009).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM