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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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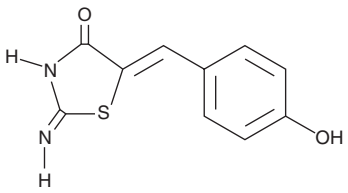
PRODUCT INFORMATION

Mirin

Item No. 13208

CAS Registry No.:	299953-00-7
Formal Name:	2-amino-5-[(4-hydroxyphenyl) methylene]-4(5H)-thiazolone
MF:	$C_{10}H_8N_2O_2S$
FW:	220.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 249, 353 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

Mirin is supplied as a crystalline solid. A stock solution may be made by dissolving the mirin in the solvent of choice, which should be purged with an inert gas. Mirin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Mirin in ethanol is approximately 0.25 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

Mirin is an inhibitor of the Mre11/Rad50/Nbs1 (MRN) complex, which functions as a DNA damage sensor and activates the DNA repair enzyme ataxia-telangiectasia mutated kinase (ATM).[1] It inhibits phosphorylation of H2AX induced by DNA containing dsDNA breaks (DSBs), indicating decreased ATM activation, with an IC_{50} value of 66 µM in *X. laevis* cell-free extracts. Mirin (100 µM) also inhibits the exonuclease activity of Mre11 in a cell-free assay. It induces cell cycle arrest at the G_2 phase in TOSA4 cells and inhibits homology-dependent repair in HEK293 cells in a concentration-dependent manner. Nanoparticle-encapsulated mirin (50 mg/kg) reduces tumor growth in an LA-N-5 mouse xenograft model.[2]

References

1. Dupré, A., Boyer-Chatenet, L., Sattler, R.M., *et al.* A forward chemical genetic screen reveals an inhibitor of the Mre11-Rad50-Nbs1 complex. *Nat. Chem. Biol.* **4(2)**, 119-125 (2008).
2. Petroni, M., Sardina, F., Infante, P., *et al.* MRE11 inhibition highlights a replication stress-dependent vulnerability of MYCN-driven tumors. *Cell Death Dis.* **9(9)**, 895 (2018).

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