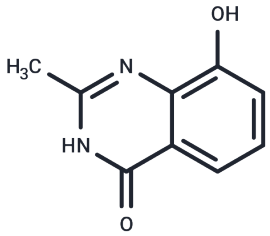
Data Sheet (Cat.No.T6912)

TargetMol

NU1025

Chemical Properties



CAS No. : 90417-38-2

Formula: C9H8N2O2

Molecular Weight: 176.17

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	NU1025 (NSC-696807) is a potent PARP inhibitor with IC50 of 400 nM.
Targets(IC50)	PARP
In vitro	NU1025 (0.2 mM) treatment attenuates Water2 induced cytotoxicity. NU1025 per se does not have any effect on cell viability. NU1025 pretreatment significantly increases cell viability (82.59 4.67%) in SIN-1 (0.8 mM) exposed cells.[2] NU1025 has no detectable effect on the proliferation of D54 and U251 cells. Treatment with NU1025 markedly inhibits the enhanced activation of PARP-1 induced by TPT and RT treatment.[3] No DNA strand breakage is detected following exposure to 200 μM NU1025 alone.[4]
In vivo	Treatment with NU1025 (1 and 3 mg/kg) reduces the infarction to 25% and 45% versus vehicle treated rats, respectively. NU1025 (1 and 3 mg/kg) treatment significantly reduces edema volume. NU1025 also produces significant improvement in neurological deficits.[2]
Kinase Assay	PARP activation assay: Cells are suspended in hypotonic buffer (9 mM HEPES, pH 7.8, 4.5% (v/v) dextran, 4.5 mM MgCl2 and 5 mM DTT) at 1.5 × 107/mL on ice for 30 min, then 9 vol of isotonic buffer (40 mM HEPES, pH 7.8, 130 mM KCl, 4% (v/v) dextran, 2 mM EGTA, 2.3 mM MgCl2, 225 mM sucrose and 2.5 mM DTT) is added. The reaction is started by adding 300 μL cells to 100 μL 300 μM NAD+ containing [32P]-NAD+, and terminated by the addition of 2 mL ice-cold 10% (w/v) TCA +10% (w/v) sodium pyrophosphate. After 30 min on ice the precipitated 32P-labelled ADP-ribose polymers are filtered, washed five times with 1% (v/v) TCA, 1% (v/v) sodium pyrophosphate, dried and counted.
Cell Research	Cells are seeded in 96-well plates at a density of 2,500 cells/well and treated with the indicated doses of NU1025. Adherent cells are irradiated in medium with 250 kVp X-rays (dose rate 0.5 Gy/min). Untreated cells are used as a control. Following an up to 5 day incubation, cell proliferation is assessed by MTT assay.(Only for Reference)

Solubility Information

Solubility	DMSO: 40 mg/mL (227.05 mM),Sonication is recommended. 1eq. NaOH: 17.6 mg/mL (99.9 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (11.35 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.6763 mL	28.3817 mL	56.7634 mL
5 mM	1.1353 mL	5.6763 mL	11.3527 mL
10 mM	0.5676 mL	2.8382 mL	5.6763 mL
50 mM	0.1135 mL	0.5676 mL	1.1353 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

McCabe N, et al. Cancer Biol Ther. 2005, 4(9), 934-936.
Kaundal RK, et al. Life Sci. 2006, 79(24), 2293-2302.
Sabbatino F, et al. Cytometry A. 2014, 85(11), 953-961.
Bowman KJ, et al. Br J Cancer. 2001, 84(1), 106-112.