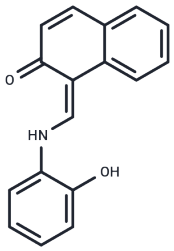
Data Sheet (Cat.No.T4311)

TargetMol

HAMNO

Chemical Properties



CAS No. : 138736-73-9

Formula: C17H13NO2

Molecular Weight: 263.29

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	HAMNO (NSC-111847) is a protein interaction inhibitor of replication protein A (RPA).
Targets(IC50)	Others,DNA/RNA Synthesis
In vitro	HAMNO inhibits colony formation in both HNSCC cell lines. The combination of HAMNO with etoposide markedly inhibits colony formation to a greater degree than HAMNO alone. In UMSCC38 cells, HAMNO dose-dependently increased the occurs of pan-nuclear γ-H2AX staining. UMSCC38 and UMSCC11B cells have prominent γ-H2AX staining, particularly after incubation with HAMNO (20 μM). In UMSCC38 and OKF4 cells, HAMNO increased γ-H2AX staining, with the greatest increase in signal occurring in S-phase.
In vivo	In mice, HAMNO inhibits the progression of UMSCC11B tumors. After treatment with etoposide (20 μM, 2 h), Ser33 of RPA32 (an ATR substrate) is highly phosphorylated, which is reduced with the addition of 2 μM HAMNO and is nearly absent at higher concentrations, demonstrating HAMNO can inhibit RPA32 phosphorylation by ATR.
Cell Research	Cell cycle assessment and γ-H2AX staining are monitored in UMSCC38 and OKF4 cells after 2 h incubation with HAMNO (2, 20, 50 μM) and fixed in 70% ethanol overnight. Cells are washed with PBS and incubated overnight in PBS containing 1% BSA, 10% goat serum, and PS139-H2AX antibodies washed and incubated in goat anti-mouse Alexa Fluor 647 antibody for 30 min at room temperature. Cells are incubated in 50 μg/mL propidium iodide and 100 μg/mL RNase A for 30 min, and 10,000 cells per sample are analyzed.
Animal Research	UMSCC38 and UMSCC11B cells are implanted into 6-week-old female mice by a single subcutaneous injection of tumor cells (2 to 6×105 cells in 100 mL of sterile PBS). The growth rates of tumors are determined by daily monitoring of tumor volume with vernier calipers [tumor volume=1/2(length×width2)]. Once the tumor size reaches 50 mm3, etoposide (10 mg/kg mouse) and HAMNO (2 mg/kg) are administered intraperitoneally every day for 3 days. Tumor size is monitored daily and the volume of the tumor is compared among all experimental groups.

Solubility Information

Solubility	DMSO: 50 mg/mL (189.9 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7981 mL	18.9905 mL	37.9809 mL
5 mM	0.7596 mL	3.7981 mL	7.5962 mL
10 mM	0.3798 mL	1.899 mL	3.7981 mL
50 mM	0.076 mL	0.3798 mL	0.7596 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

Glanzer JG, et al. RPA inhibition increases replication stress and suppresses tumor growth. Cancer Res. 2014 Sep 15;74(18):5165-72.