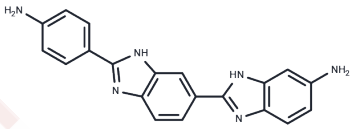
Data Sheet (Cat.No.T16773)

TargetMol

Ro 90-7501

Chemical Properties



CAS No. : 293762-45-5

Formula: C20H16N6

Molecular Weight: 340.38

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	Ro 90-7501 is an amyloid β42 (Aβ42) protofibrillar and TPR-dependent PP5 inhibitor, a novel radiosensitizer for cervical cancer cells, which inhibits ATM phosphorylation, promotes apoptosis, and induces cell-cycle arrest. Ro 90-7501 also exhibits antiviral activity and potential anticancer activity by inhibiting ATM phosphorylation and DNA repair, and by inhibiting HCMV.
Targets(IC50)	Apoptosis,ATM/ATR,Beta Amyloid,Gamma-secretase,Phosphatase
In vitro	Compared to control HeLa and ME-180 cells, Ro 90-7501 significantly enhances radiation sensitivity. Following irradiation, Ro 90-7501 markedly increases apoptosis and impairs the cell cycle. Post-irradiation, Ro 90-7501 suppresses the phosphorylation of ATM and its downstream proteins, such as H2AX, Chk1, and Chk2[2]. RO 90-7501 itself does not affect IFN-β and NFκB promoter activity but significantly enhances poly I:C-induced IFN-β promoter activation and dose-dependently inhibits NF-κB activation. Treatment with RO 90-7501 significantly enhances the antiviral activity of poly I:C[1].
In vivo	Treatment with Ro 90-7501 (5 μg/g; intraperitoneal injection; daily; continuous for 21 days; female BALB/c nude mice) significantly delays tumor growth and markedly reduces tumor volume[2].

Solubility Information

Solubility	DMSO: 30 mg/mL (88.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 2 mg/mL (5.88 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	2.9379 mL	14.6895 mL	29.3789 mL
5 mM	0.5876 mL	2.9379 mL	5.8758 mL
10 mM	0.2938 mL	1.4689 mL	2.9379 mL
50 mM	0.0588 mL	0.2938 mL	0.5876 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

Guo F, et al. RO 90-7501 enhances TLR3 and RLR agonist induced antiviral response. PLoS One. 2012;7(10):e42583.
Tamari K, et al. Ro 90-7501 Is a Novel Radiosensitizer for Cervical Cancer Cells that Inhibits ATM Phosphorylation. Anticancer Res. 2019 Sep;39(9):4805-4810.
Hong TJ, et al. Ro 90-7501 inhibits PP5 through a novel, TPR-dependent mechanism. Biochem Biophys Res Commun. 2017 Jan 8;482(2):215-220.
Bohrmann B, et al. Self-assembly of beta-amyloid 42 is retarded by small molecular ligands at the stage of structural intermediates. J Struct Biol. 2000 Jun;130(2-3):232-46.