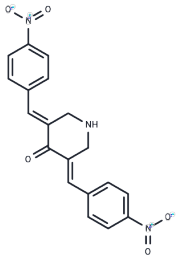
Data Sheet (Cat.No.T8464)

TargetMol

RA-9

Chemical Properties



CAS No. : 919091-63-7

Formula: C19H15N3O5

Molecular Weight: 365.34

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	RA-9 is a potent and selective proteasome-associated inhibitor of deubiquitinating enzymes (DUBs) with a favorable toxicity profile and anticancer activity, particularly effective in inducing apoptosis in ovarian cancer cell lines.
Targets(IC50)	Apoptosis,DUB
In vitro	The characterization of RA-9 as a small-molecule inhibitor of proteasome-associated DUBs.?Treatment with RA-9 selectively induces onset of apoptosis in ovarian cancer cell lines and primary cultures derived from donors.?Loss of cell viability following RA-9 exposure is associated with an unfolded protein response as mechanism to compensate for unsustainable levels of proteotoxic stress.
In vivo	In vivo treatment with RA-9 retards tumor growth, increases overall survival, and was well tolerated by the host.
Animal Research	Mice were inoculated i.p. with 100,000 ES-2 cells (in 100 µl DMEM) stably expressing GFP.?When tumor was detectable (approx.?6 days post inoculation), mice were randomly assigned into two groups receiving RA-9 or 0.9% saline.?Treatment with RA-9 was given i.p. on a one-day on, two-days off schedule.?The control group received the vehicle alone at the same schedule.?Working concentrations of RA-9 (10 mg/ml) were reached by dissolution in Cremophor EL and polyethylene glycol 400 (Sigma).?Prior to each injection RA-9 was further diluted in 0.9% saline (working concentration 1mg/ml).? To monitor for tumor growth, RA-9 treated and control mice were imaged with an IVIS SpectrumCT Pre-clinical in vivo imaging system (PerkinElmer) every other day.?Animals were sacrificed when abdomens became distended to twice normal size.

Solubility Information

Solubility	DMSO: 4 mg/mL (10.95 mM),Sonication and heating to 80℃ are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7372 mL	13.6859 mL	27.3718 mL
5 mM	0.5474 mL	2.7372 mL	5.4744 mL
10 mM	0.2737 mL	1.3686 mL	2.7372 mL
50 mM	0.0547 mL	0.2737 mL	0.5474 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

Coughlin K , Anchoori R , Iizuka Y , et al. Small-molecule RA-9 inhibits proteasome-associated DUBs and ovarian cancer in vitro and in vivo via exacerbating unfolded protein responses.[J]. Clinical Cancer Research An Official Journal of the American Association for Cancer Research, 2014, 20(12):3174-86.