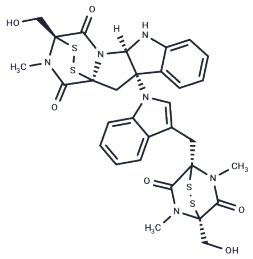
Data Sheet (Cat.No.T6804)

TargetMol

Chetomin

Chemical Properties



CAS No. : 1403-36-7

Formula: C31H30N6O6S4

Molecular Weight: 710.87

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	Chetomin (BRN0077366) is an inhibitor of HIF-1 by weaken transcription of HIF-1, disrupting the binding of HIF-1α and HIF-2α to p300 at low nanomolar concentrations.
Targets(IC50)	Apoptosis,HSP,HIF
In vitro	HIF-1 (hypoxia-inducible factors 1) is transcription factor which respond to changes of cellular environment oxygen[2]. Chetomin selectively inhibits HIF-1 activities through disruption of the interaction of HIF-1 with its transcriptional coactivator p300. HIF-1 inhibition by chetomin effectively reduces hypoxia-dependent transcription and radiosensitizes hypoxic HT 1080 human fibrosarcoma cells in vitro[1]. Chetomin attenuates the hypoxia-induced radioresistance of malignant glioma cell lines U251 mg (DMF10: 1.35 and 1.18) and U343 mg (DMF10: 1.78 and 1.48)[3]. Targeting of HIF-1 using chetomin abolishes the differentiation-inhibitory effect of hypoxia-inducible factor-1α [4].
In vivo	Administration of chetomin in combination with forskolin significantly suppresses malignant glioma growth in an in vivo xenograft model [4]. Che-M(chetomin loaded micelles) dramatically inhibits embryonic angiogenesis, tumor-induced angiogenesis and tumor growth in zebrafish. In mouse model, Che-M suppresses tumor growth and prolongs the survival in the subcutaneous CT26 tumor model [5].
Cell Research	In RT-PCR and clonogenic survival experiments, chetomin is added in a concentration of 150 nM to fully supplemented medium four hours before treatment with hypoxia. HT 1080 cells are then transferred to the hypoxic workstation (0.1% O2, 12 h) or to the well-humidified incubator (12 hours) without changing medium. HT1080 cells are thus treated for 16 hours with chetomin (150 nM) prior to radiation treatment. (Only for Reference)

Solubility Information

Solubility	Ethanol: 10 mg/mL (14.07 mM),Sonication is recommended. H2O: <1 mg/mL, DMSO: 93 mg/mL (130.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4067 mL	7.0336 mL	14.0673 mL
5 mM	0.2813 mL	1.4067 mL	2.8135 mL
10 mM	0.1407 mL	0.7034 mL	1.4067 mL
50 mM	0.0281 mL	0.1407 mL	0.2813 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

Staab A,et al. BMC Cancer. 2007, 7:231.
Thomas G Smith, et al. Br J Haematol. 2008, 141(3):325-334.
Thomas G Smith, et al. BMC Cancer. 2010, 10:605.
Lu H, et al. FEBS J. 2009, 276(24):7291-7304.
Wu Q, et al. Nanoscale. 2014, 6(20):11940-11952.