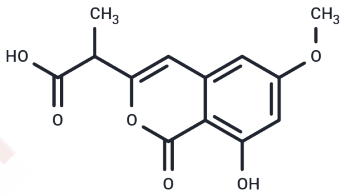
Data Sheet (Cat.No.T33701)

TargetMol

NM-3

Chemical Properties



CAS No. : 181427-78-1

Formula: C13H12O6

Molecular Weight: 264.23

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	NM-3 is an orally available anti-angiogenic inhibitor with anti-tumour activity.NM-3 is used as a radiation modulator in vitro and in vivo.NM-3 inhibits vascular endothelial growth factor (VEGF), thereby inhibiting the proliferation of endothelial cells. This inhibits the proliferation of endothelial cells. NM-3 is associated with a mechanism of apoptosis induction by reactive oxygen species.
Targets(IC50)	Apoptosis,Others,Reactive Oxygen Species,MDM-2/p53
In vitro	NM-3 (100 ng/ml) is cytotoxic to human umbilical vein endothelial cells (HUVECs) but not to Lewis lung carcinoma (LLC) cells nor Seg-1, esophageal adenocarcinoma cells, in clonogenic survival assays (1,000 ng/ml ； 4h).[1]
In vivo	C57BL/6 female mice bearing LLC tumors were given injections for 4 consecutive days with NM-3 (25 mg/kg/day) and treated with IR (20 Gy) for 2 consecutive days. Combined treatment with NM-3 and IR significantly reduced mean tumor volume compared with either treatment alone. An increase in local tumor control was also observed in LLC tumors in mice receiving NM-3/IR therapy. When athymic nude mice bearing Seg-1 tumor xenografts were treated with NM-3 (100 mg/kg/day for 4 days) and 20 Gy (four 5 Gy fractions), significant tumor regression was observed after combined treatment (NM-3 and IR) compared with IR alone. Importantly, no increase in systemic or local tissue toxicity was observed after combined treatment (NM-3 and IR) when compared with IR alone. The bioavailability and nontoxic profile of NM-3 suggests that the efficacy of this agent should be tested in clinical radiotherapy.[1]

Solubility Information

Solubility	DMSO: 27.5 mg/mL (104.08 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7846 mL	18.9229 mL	37.8458 mL
5 mM	0.7569 mL	3.7846 mL	7.5692 mL
10 mM	0.3785 mL	1.8923 mL	3.7846 mL
50 mM	0.0757 mL	0.3785 mL	0.7569 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

Salloum RM, et al. NM-3, an isocoumarin, increases the antitumor effects of radiotherapy without toxicity. Cancer Res. 2000 ; 60(24):6958-6963.
Zhu JS, et al. Molecule action mechanisms of NM-3 on human gastric cancer SGC-7901 cells in vivo or in vitro. World J Gastroenterol. 2003 ; 9(10):2366-2369.
Agata N, et al. Suppression of type II collagen-induced arthritis by a new isocoumarin, NM-Res Commun Mol Pathol Pharmacol. 2000 ; 108(5-6):297-309.
Yin L, et al. The novel isocoumarin 2-(8-hydroxy-6-methoxy-1-oxo-1H-2-benzopyran-3-yl) propionic acid (NM-3) induces lethality of human carcinoma cells by generation of reactive oxygen species. Mol Cancer Ther. 2001 ; 1(1): 43-48.

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