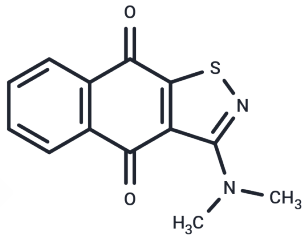
Data Sheet (Cat.No.T19405)

TargetMol

LOM612

Chemical Properties



CAS No. : 2173232-79-4

Formula: C13H10N2O2S

Molecular Weight: 258.3

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	LOM612 is a potent and specific FOXO relocator that induces nuclear translocation of the FOXO3a reporter protein as well as endogenous FOXO3a and FOXO1 in a dose-dependent manner in U2OS cells, down-regulates the expression of c-Myc and cyclin D1, and has anti-proliferative effects in human cancer cell lines.
Targets(IC50)	FOXO1,FOXO3
In vitro	LOM612 is cytotoxic to HepG2 cells, with an IC50 value of 0.64 μM, and does not sensitize non-cancer THLE2 cells (IC50, 2.76 μM).LOM612 potently activates nuclear translocation of FOXO with an EC50 value of 1.5 μM, and this effect is independent of CRM-1. LOM612 effectively induces translocation of endogenous FOXO3a and FOXO1, and increases the expression of the FOXO target genes p27 and FasL. LOM612 shows no effect on the nuclear export of endogenous NFKB2 transcription factor in U2OS cells. [1]
In vivo	LOM612 suppressed tumor growth in MCF-7 cell-derived xenograft mouse models by promoting FOXO1 nuclear localization, downregulating c-Myc and cyclin D1 expression, and showed enhanced antitumor efficacy when combined with selinexor.[2]

Solubility Information

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

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8715 mL	19.3573 mL	38.7147 mL
5 mM	0.7743 mL	3.8715 mL	7.7429 mL
10 mM	0.3871 mL	1.9357 mL	3.8715 mL
50 mM	0.0774 mL	0.3871 mL	0.7743 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.

Reference

Cautain B, et al. Discovery of a Novel, Isothiazolonaphthoquinone-Based Small Molecule Activator of FOXO Nuclear-Cytoplasmic Shuttling. PLoS One. 2016 Dec 9;11(12):e0167491.
Han Z, Yu H, Liu Z, et al.The hypoglycemic effect of ginsenoside Rd in db/db mice is mediated by increased insulin sensitivity and suppressed hepatic gluconeogenesis.Journal of Functional Foods.2024, 122: 106475.
Xu S, Shi Y, Li S. Enhanced anticancer synergy of LOM612 in combination with selinexor: FOXO1 nuclear translocation-mediated inhibition of Wnt/β-catenin signaling pathway in breast cancer. Cancer Chemother Pharmacol. 2024 Mar;93(3):191-202.

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