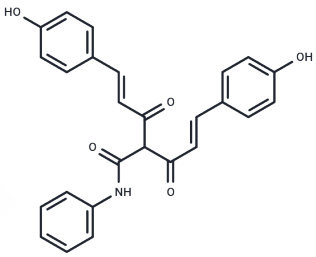
Data Sheet (Cat.No.T36492)

TargetMol

CMC2.24

Chemical Properties



CAS No. : 1255639-43-0

Formula: C26H21NO5

Molecular Weight: 427.45

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	CMC2.24 (TRB-N0224) is an orally active tricarbonylmethane agent that demonstrates effectiveness in inhibiting Ras activation and the downstream effector ERK1/2 pathway, thus effectively combating pancreatic tumor formation in mice. Additionally, CMC2.24 exerts potent inhibitory effects on zinc-dependent MMPs, with IC50s ranging from 2.0-69 μM. Furthermore, CMC2.24 aids in alleviating the progression of osteoarthritis by restoring cartilage homeostasis and inhibiting chondrocyte apoptosis through the NF-κB/HIF-2α axis[1][2][3].
Targets(IC50)	Apoptosis,MMP,Others,Ras
In vitro	CMC2.24 (0-60 μM; 24 hours) inhibits pancreatic cancer growth in vitro by reducing STAT3Ser727 phosphorylation levels, inducing mitochondrial reactive oxygen species, and promoting intrinsic apoptosis and mitochondrial cell death in pancreatic cancer cells[1].
In vivo	CMC2.24 (50 mg/kg; p.o.; five times per week for 17 days) inhibits pancreatic cancer xenograft growth and human PC through a potent cytokinetic effect, and disrupts the ERK signaling pathway in PC cells and xenografts[1].

Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3395 mL	11.6973 mL	23.3945 mL
5 mM	0.4679 mL	2.3395 mL	4.6789 mL
10 mM	0.2339 mL	1.1697 mL	2.3395 mL
50 mM	0.0468 mL	0.2339 mL	0.4679 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

Mallangada NA, et al. A novel tricarbonylmethane agent (CMC2.24) reduces human pancreatic tumor growth in mice by targeting Ras. Mol Carcinog. 2018;57(9):1130-1143.
Zhou Y, et al. Chemically modified curcumin (CMC2.24) alleviates osteoarthritis progression by restoring cartilage homeostasis and inhibiting chondrocyte apoptosis via the NF-κB/HIF-2α axis. J Mol Med (Berl). 2020;98(10):1479-1491.
Zhang Y, et al. Design, synthesis and biological activity of new polyenolic inhibitors of matrix metalloproteinases: a focus on chemically-modified curcumins. Curr Med Chem. 2012;19(25):4348-4358.

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