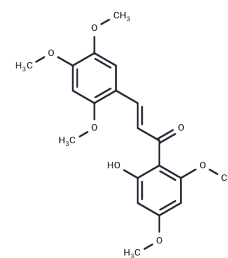


Rubone

Chemical Properties

CAS No. :	73694-15-2
Formula:	C ₂₀ H ₂₂ O ₇
Molecular Weight:	374.38
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	Rubone (2'-Hydroxy-2,4,4',5,6'-pentamethoxychalcone), a natural product and a modulator of miR-34a (microRNA-34), upregulates miR-34a expression in a p53-dependent manner, which in turn downregulates the expression of downstream targets Bcl-2, cyclin-D1, CDK6, SIRT1, and FOXp1, thereby inhibiting tumor growth and reversal of hepatocellular carcinoma (HCC) and chemoresistance in prostate cancer.
Targets(IC50)	MicroRNA
In vitro	Methods: DU145-TXR and PC3-TXR cells were treated with Rubone (5, 10 μM, 48 hours) and protein expression was measured. Results: Rubone significantly reversed the expression of miR-34a downstream gene targets in DU145-TXR and PC3-TXR cell lines. [1]
In vivo	Methods: Rubone (20, 50 mg/kg, gavage, once every two days, 24 days) was used to treat HepG2 xenograft nude mice. Tumor volume and body weight were measured every 2 days. Mice were sacrificed and tumor tissues were collected for subsequent RNA extraction or tissue sections were sliced and the expression levels of pri-miR34a, miR34a, cyclin D1, and Bcl-2 in xenograft tumors were measured by qRT-PCR. Results: Rubone delayed tumor growth by 78.27% and 89.64% at doses of 20 and 50 mg/kg, respectively. Pri-miR34a and miR34a levels were upregulated in mouse xenograft tumors, while cyclin D1 and Bcl-2, which are targeted by miR34a, were downregulated. [4]

Solubility Information

Solubility	DMSO: 1 mg/mL (2.67 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6711 mL	13.3554 mL	26.7108 mL
5 mM	0.5342 mL	2.6711 mL	5.3422 mL
10 mM	0.2671 mL	1.3355 mL	2.6711 mL
50 mM	0.0534 mL	0.2671 mL	0.5342 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

- Wen D, Peng Y, Lin F, Singh RK, Mahato RI. Micellar Delivery of miR-34a Modulator Rubone and Paclitaxel in Resistant Prostate Cancer. *Cancer Res.* 2017 Jun 15;77(12):3244-3254.
- Deng X, et al. Carboxymethyl Dextran-Stabilized Polyethylenimine-Poly(epsilon-caprolactone) Nanoparticles-Mediated Modulation of MicroRNA-34a Expression via Small-Molecule Modulator for Hepatocellular Carcinoma Therapy. *ACS Appl Mater Interfaces.* 2016 Jul 13;8(27):17068-79.
- Xiao Z, et al. Small molecule targeting miR-34a for cancer therapy. *Mol Cell Oncol.* 2015 Feb 24;2(1):e977160.
- Xiao Z, et al. A small-molecule modulator of the tumor-suppressor miR34a inhibits the growth of hepatocellular carcinoma. *Cancer Res.* 2014 Nov 1;74(21):6236-47.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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