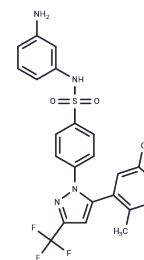


COX-2-IN-55

Chemical Properties

CAS No. : 2649115-80-8
 Formula: C₂₄H₂₁F₃N₄O₂S
 Molecular Weight: 486.51
 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	COX-2-IN-55 (compound 1) is an orally active Celecoxib analogue with broad-spectrum anticancer properties and relatively weak COX-2 inhibition. It specifically inhibits SERCA2, leading to increased caspase-3 cleavage and DR5 levels, which activates GRP78 and suppresses the progression of triple-negative breast cancer (TNBC). Additionally, COX-2-IN-55 downregulates the angiogenesis markers VEGF- α and IL-8, thereby inhibiting microvessel formation.
Targets(IC50)	Calcium Channel,Caspase,VEGFR
In vitro	COX-2-IN-55 (compound 1) inhibits the viability of MDA-MB-231, MDA-MB-468, 4T1, T47D, and MCF-7 cells, with EC ₅₀ values of 14.99 μ M, 14.26 μ M, 11.23 μ M, 17.3 μ M, and 25.02 μ M, respectively.
In vivo	COX-2-IN-55, administered at 25 mg/kg/day and 50 mg/kg/day orally for 28 days, exhibits significant antitumor activity in the MDA-MB-231 xenograft model using nu/nu nude mice, achieving up to 85% tumor regression. At a dosage of 100 mg/kg/day, COX-2-IN-55 does not cause notable biochemical or histological toxicity in mice after 48 days of treatment.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0555 mL	10.2773 mL	20.5546 mL
5 mM	0.4111 mL	2.0555 mL	4.1109 mL
10 mM	0.2055 mL	1.0277 mL	2.0555 mL
50 mM	0.0411 mL	0.2055 mL	0.4111 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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