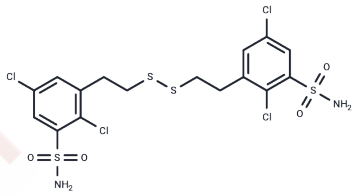
Data Sheet (Cat.No.T3169)

KC7F2

Chemical Properties



CAS No. : 927822-86-4

Formula: C16H16Cl4N2O4S4

Molecular Weight: 570.38

Appearance: no data available

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

Biological Description

Description	KC7F2 is a potent HIF-1 pathway inhibitor with potential anti-cancer activity.
Targets(IC50)	HIF/HIF Prolyl-Hydroxylase,HIF
In vitro	KC7F2 inhibits HRE-driven transcription and decreases HIF-1α protein levels in LN229-HRE-AP cells. KC7F2 shows a dose-response cytotoxicity with IC50 of approximately 15 to 25 μM in cancer cells MCF7, LNZ308, A549, U251 mg, and LN229. In D54 mg glioma cells, KC7F2 inhibits colony formation, especially under hypoxia. [1] In hypoxic microglial cultures, KC7F2 downregulates the expression of TfR and DMT, and reduces the HIF-1α mediated iron accumulation. [2]
In vivo	KC7F2 significantly reduces the latent period in the pentylenetetrazole kindling rat model and increases the rate of spontaneous recurrent seizures during the chronic stage in the lithium-pilocarpine rat model. [3]
Kinase Assay	HIF transcriptional activity assay: Cells are incubated at 37 in a humidified atmosphere containing 5% CO2 and 21% O2 (normoxia) or 1% O2 (hypoxia) in a hypoxia workstation. The LN229-HRE-AP reporter cell line for HIF transcriptional activity is created by stably transfecting LN229 cells with the pACN188 plasmid, which contains an alkaline phosphatase gene driven by six HREs derived from the VEGF gene.
Cell Research	Cells are seeded onto 96-well plates (4 × 103/well) and cultured under normoxic (21% O2) and hypoxic (1% O2) conditions with different concentrations of KC7F2 for 72 h or treated for various times with 20 μM KC7F2. For proliferation analysis, cells are fixed with 50% trichloroacetic acid for 1 h at 4°C, followed by staining with 0.4% sulforhodamine B dissolved in 1% acetic acid for 30 min at room temperature. Plates are washed five times with 1% acetic acid to remove unbound dye. Bound dye is dissolved by adding 10 mM unbuffered Tris base. Cell proliferation is calculated by measuring OD values at 564 nm using a spectrophotometer.(Only for Reference)

Solubility Information

Solubility	DMSO: 57 mg/mL (99.93 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7532 mL	8.7661 mL	17.5322 mL
5 mM	0.3506 mL	1.7532 mL	3.5064 mL
10 mM	0.1753 mL	0.8766 mL	1.7532 mL
50 mM	0.0351 mL	0.1753 mL	0.3506 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

Narita T, et al. Clin Cancer Res. 2009, 15(19), 6128-6136.
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Yang X L, Zeng M L, Shao L, et al. NFAT5 and HIF-1α Coordinate to Regulate NKCC1 Expression in Hippocampal Neurons after Hypoxia-Ischemia. Frontiers in Cell and Developmental Biology. 2019, 7: 339
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