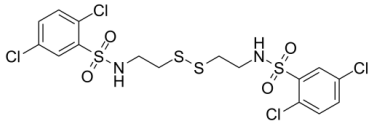
Data Sheet

Product Name:	KC7F2
Cat. No.:	CS-5069
CAS No.:	927822-86-4
Molecular Formula:	C16H16Cl4N2O4S4
Molecular Weight:	570.38
Target:	HIF/HIF Prolyl-Hydroxylase
Pathway:	Metabolic Enzyme/Protease
Solubility:	DMSO : ≥ 32 mg/mL (56.10 mM)



BIOLOGICAL ACTIVITY:

KC7F2 is a potent **hypoxia inducible factor-1 (HIF-1)** pathway inhibitor with an **IC_{50}** of 20 μM in LN229-HRE-AP cells, and with potential as a cancer therapy agent[1]. IC50 & Target: IC50: 20 μM (HIF-1, LN229-HRE-AP cells)[1] **In Vitro:** KC7F2 (15–25 μM; 0-72 hours) exhibits a clear dose-response cytotoxicity with an IC_{50} value of approximately 15–25 μM depending on the cell lines, and this effect is more severe under hypoxic conditions[1].

KC7F2 (0-80 μM; 6 hours) specifically reduces the protein levels of HIF-1α in a dose-dependent manner under hypoxic conditions; strongly decrease in HIF-1α levels at concentrations above 20 μM[1].

KC7F2 does not affect the rate of HIF-1α protein degradation[1].

KC7F2 inhibits HIF-1α protein synthesis but not its mRNA transcription[1].

KC7F2 represses the phosphorylation of eukaryotic initiation factor 4E binding protein 1 (4EBP1)[1].

PROTOCOL (Extracted from published papers and Only for reference)

Cell assay [1] Cells are seeded onto 96-well plates (4×103 per well) and cultured under normoxic (21% O2) and hypoxic (1% O2) conditions with different concentrations of KC7F2 for 72 hrs or treated for various times with 20 μM KC7F2. For proliferation analysis, cells are fixed with 50% Trichloroacetic acid for one hour at 4°C, followed by staining with 0.4% SRB 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.

References:

[1]. Narita T, et al. Identification of a novel small molecule HIF-1alpha translation inhibitor. Clin Cancer Res. 2009 Oct 1;15(19):6128-6136.

CAIndexNames:

Benzenesulfonamide, N,N'-(dithiodi-2,1-ethanediyl)bis[2,5-dichloro-

SMILES:

O=S(C1=CC(Cl)=CC=C1Cl)(NCCSSCCNS(C2=CC(Cl)=CC=C2Cl)(=O)=O)=O

Caution: Product has not been fully validated for medical applications. For research use only.

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