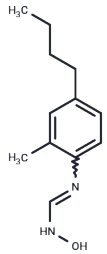
Data Sheet (Cat.No.T11556)

TargetMol

HET0016

Chemical Properties



CAS No. : 339068-25-6

Formula: C12H18N2O

Molecular Weight: 206.28

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	HET0016 is a potent and selective 20-HETE synthase inhibitor (IC50s: 17.7 nM, 12.1 nM, and 20.6 nM for recombinant CYP4A1-, CYP4A2-, and CYP4A3-catalyzed 20-HETE synthesis) and a selective CYP450 inhibitor, shown to inhibit angiogenesis and tumor growth.
Targets(IC50)	Others,Cytochromes P450
In vitro	HET0016 (100 μM; 24 hours, 48 hours) decreases migration and invasion of breast cancer metastatic cells .HET0016 is a selective, non-competitive and irreversible inhibitor of CYP4A .
In vivo	HET0016 decreases expression of pro-inflammatory and growth factors and granulocytic MDSCs population in lung microenvironment. HET0016 protects BBB dysfunction after I/R by regulating the expression of MMP-9 and tight junction proteins. HET0016 (10 mg/kg/day; i.v.; for 3 weeks) reduces tumor volume and lung metastasis in an immunocompetent breast cancer mouse model. HET0016 reduces the metalloproteinases' levels in the lungs via PI3K/AKT pathway in mice.

Solubility Information

Solubility	DCM: 12.5 mg/mL (60.6 mM),Sonication is recommended. DMSO: 5 mg/mL (24.24 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.8478 mL	24.2389 mL	48.4778 mL
5 mM	0.9696 mL	4.8478 mL	9.6956 mL
10 mM	0.4848 mL	2.4239 mL	4.8478 mL
50 mM	0.097 mL	0.4848 mL	0.9696 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

Seki T, et al. Cytochrome P450 4A isoform inhibitory profile of N-hydroxy-N'-(4-butyl-2-methylphenyl)-formamidine (HET0016), a selective inhibitor of 20-HETE synthesis. Biol Pharm Bull. 2005 Sep;28(9):1651-4.
Borin TF, et al. HET0016 decreases lung metastasis from breast cancer in immune-competent mouse model. PLoS One. 2017 Jun 13;12(6):e0178830.
Liu Y, et al. The protective effect of HET0016 on brain edema and blood-brain barrier dysfunction after cerebral ischemia/reperfusion. Brain Res. 2014 Jan 28;1544:45-53.