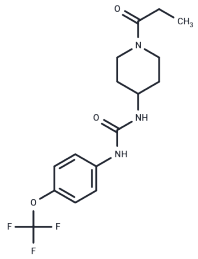
Data Sheet (Cat.No.T7199)

TargetMol

TPPU

Chemical Properties



CAS No. : 1222780-33-7

Formula: C16H20F3N3O3

Molecular Weight: 359.34

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	TPPU is a potent inhibitor of both human and mouse sEH (IC50 of 3.7 and 2.8 nM, respectively)
Targets(IC50)	Epoxide Hydrolase
In vivo	TPPU and two 4-(cyclohexyloxy) benzoic acid urea sEHIs displayed high plasma concentrations (>10 × IC(50)), when dosed orally at 0.3 mg·kg(-1). Although the 4-(cyclohexyloxy) benzoic acid ureas were more potent against monkey sEH than piperidyl ureas (TPAU and TPPU), the latter compounds showed higher plasma concentrations and more drug-like properties. The C(max) increased with dose from 0.3 to 3 mg·kg(-1) for TPPU and from 0.1 to 3 mg·kg(-1) for TPAU, although it was not linear over this range of doses. As an indication of target engagement, ratios of linoleate epoxides to diols increased with TPPU administration[1].
Animal Research	PK parameters of 11 sEHIs in cynomolgus monkeys were determined after oral dosing with 0.3 mg/kg. Their physical properties and inhibitory potency in hepatic cytosol of cynomolgus monkeys were examined. Dose-dependent effects of the two inhibitors 1-trifluoromethoxyphenyl-3-(1-propionylpiperidin-4-yl) urea (TPPU) and the related acetyl piperidine derivative, 1-trifluoromethoxyphenyl-3-(1-acetylpiperidin-4-yl) urea (TPAU), on natural blood eicosanoids[1]

Solubility Information

Solubility	DMSO: 28 mg/mL (77.92 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.57 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7829 mL	13.9144 mL	27.8288 mL
5 mM	0.5566 mL	2.7829 mL	5.5658 mL
10 mM	0.2783 mL	1.3914 mL	2.7829 mL
50 mM	0.0557 mL	0.2783 mL	0.5566 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

Pharmacokinetics and in vivo potency of soluble epoxide hydrolase inhibitors in cynomolgus monkeys[J]. British Journal of Pharmacology, 2012, 165.
Yao ES, Tang Y, Liu XH,et al.TPPU protects tau from H2O2-induced hyperphosphorylation in HEK293/tau cells by regulating PI3K/AKT/GSK-3β pathway[J].J Huazhong Univ Sci Technolog Med Sci. 2016 Dec;36(6):785-790.