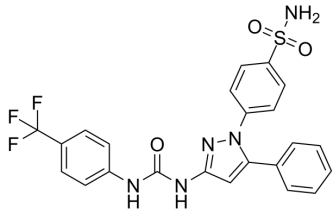
COX-2/sEH-IN-1

Cat. No.:	HY-146704
CAS No.:	2474977-38-1
Molecular Formula:	$C_{23}H_{18}F_3N_5O_3S$
Molecular Weight:	501.48
Target:	Epoxide Hydrolase; COX
Pathway:	Metabolic Enzyme/Protease; Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

COX-2/sEH-IN-1 (Compound 9c) is an orally active, dual COX-2 and sEH (soluble epoxide hydrolase) inhibitor with IC_{50} values of 1.24 μM and 0.40 nM against COX-2 and sEH, respectively. COX-2/sEH-IN-1 shows improved anti-inflammatory activity and highly reduced cardiovascular risks[1].

IC_{50} & Target

sEH	COX-2	COX-1
0.40 nM (IC_{50})	1.24 μM (IC_{50})	8.72 μM (IC_{50})

In Vivo

COX-2/sEH-IN-1 (Compound 9c) (10 mg/kg; p.o.; once) exhibits analgesic activity[1].
COX-2/sEH-IN-1 (50 mg/kg; p.o.; once) shows high anti-inflammatory activity[1].
COX-2/sEH-IN-1 (100 mg/kg; p.o.; 2 weeks) affords a perfect cardio-protection and less cardiovascular liabilities[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Albino mice (20-30 g)[1]
Dosage:	10 mg/kg
Administration:	Oral administration, once
Result:	Exhibited analgesic activity with 65.67% inhibition in the number of writhing.

Animal Model:	Albino rats (120-150 g), carrageenan-induced paw edema model[1]
Dosage:	50 mg/kg
Administration:	Oral administration, once
Result:	Showed high anti-inflammatory activity with edema inhibition of 64.06%, 95.82%, and 98.15% at 1, 3, 5 h, respectively.

Animal Model:	Adult male albino Wister rats (170-200 g)[1]
Dosage:	100 mg/kg

Administration:	Oral administration, 2 weeks
Result:	Exhibited a significant lowering in Troponine-I, LDH and CK-MB levels when compared to celecoxib treated group. Showed remarkably decrease in TNF-α concentration compared to the celecoxib induced cardio-toxicity group. Restored heart GSH level and significantly increased PGI2 level compared to celecoxib group. Showed mild decongestant and mild edema on cardiac blood vessels and showed more or less normal muscle bundles.

REFERENCES

[1]. Ahmed H Abdelazeem, et al. Discovery of novel urea-diarylpyrazole hybrids as dual COX-2/sEH inhibitors with improved anti-inflammatory activity and highly reduced cardiovascular risks. Eur J Med Chem. 2020 Nov 1;205:112662.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA