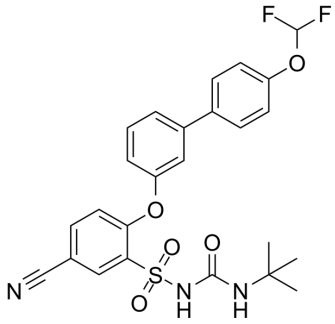
NTP42

Cat. No.:	HY-129851
CAS No.:	2055599-51-2
Molecular Formula:	$C_{25}H_{23}F_2N_3O_5S$
Molecular Weight:	515.53
Target:	Prostaglandin Receptor
Pathway:	GPCR/G Protein
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 31.25 mg/mL (60.62 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9398 mL	9.6988 mL	19.3975 mL
	5 mM	0.3880 mL	1.9398 mL	3.8795 mL
	10 mM	0.1940 mL	0.9699 mL	1.9398 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.03 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NTP42 is a thromboxane A2 (TXA2) receptor antagonist with an IC_{50} of 3.278 nM for antagonizing T prostanoid receptor (TP)-mediated [Ca^{2+}] mobilization following stimulation of cells with the alternative TP agonist U46619[1]. NTP42 can be used for the treatment of pulmonary arterial hypertension (PAH)[2].

IC_{50} & Target

TXA_2

In Vivo

NTP42 (0.25 mg/kg BID) is potent in a monocrotaline (MCT)-induced PAH rat model (28-day drug treatment is initiated within 24 h post-MCT) in haemodynamic assessments. NTP42 reduces the MCT-induced PAH, including mean pulmonary arterial pressure (mPAP) and right systolic ventricular pressure (RSVP). Moreover, NTP42 is superior to Sildenafil and Selexipag in significantly reducing pulmonary vascular remodelling, inflammatory mast cell infiltration and fibrosis in MCT-treated

animals[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar-Kyoto rats[2]
Dosage:	0.25 mg/kg BID
Administration:	28-day drug treatment was initiated within 24 h post-MCT (60 mg/kg)
Result:	Reduced the MCT-induced PAH, including mPAP and RSVP.

REFERENCES

[1]. B. Therese KINSELLA, et al. Thromboxane receptor antagonists. WO2016203314A1.

[2]. Eamon Mulvaney, et al. NTP42, a novel antagonist of the thromboxane receptor, attenuates experimentally induced pulmonary arterial hypertension.

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