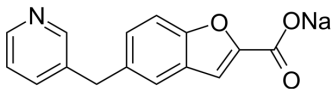
Furegrelate sodium

Cat. No.:	HY-106080A
CAS No.:	85666-17-7
Molecular Formula:	$C_{15}H_{10}NNaO_3$
Molecular Weight:	275.23
Target:	Others
Pathway:	Others
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 13 mg/mL (47.23 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.6333 mL	18.1666 mL	36.3332 mL
	5 mM	0.7267 mL	3.6333 mL	7.2666 mL
	10 mM	0.3633 mL	1.8167 mL	3.6333 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: ≥ 1.67 mg/mL (6.07 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.67 mg/mL (6.07 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.67 mg/mL (6.07 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Furegrelate Sodium (U-63557A) is a potent, orally available, and selective thromboxane synthase inhibitor. Furegrelate Sodium inhibits human platelet microsomal thromboxane A2 (TxA2) synthase with an IC_{50} of 15 nM. Furegrelate Sodium is being developed as an antiplatelet agent[1][2].

In Vivo

Furegrelate Sodium (1-5 mg/kg; po) prevents blockage of the coronary artery[1].
Furegrelate Sodium (0.1-5 mg/kg; i.v.) prevents the blockage of stenosed coronary arteries caused platelet aggregation[1].
Furegrelate Sodium blunts the development of hypoxia-induced pulmonary arterial hypertension (PAH) in an established neonatal piglet model primarily by preserving the structural integrity of the pulmonary vasculature[2].
Furegrelate has a long half-life compared to several other drugs used to treat PAH, including nitric oxide and prostagcyclin

analogues; And Furegrelate is highly specific to the target enzyme[2].

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

Animal Model:	Mongrel dogs (19-30 kg)[1]
Dosage:	1-5 mg/kg
Administration:	Oral (via a gastric tube)
Result:	Prevented blockage of the coronary artery.

REFERENCES

[1]. Gorman RR, et al. Inhibition of platelet thromboxane A2 synthase activity by sodium 5-(3'-pyridinylmethyl)benzofuran-2-carboxylate. Prostaglandins. 1983 Aug;26(2):325-42.

[2]. Hirenallur-S DK, et al. Furegrelate, a thromboxane synthase inhibitor, blunts the development of pulmonary arterial hypertension in neonatal piglets. Pulm Circ. 2012 Apr-Jun;2(2):193-200.

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