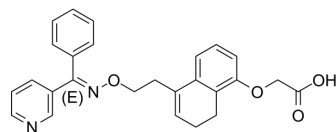


ONO 1301

Cat. No.:	HY-106961		
CAS No.:	176391-41-6		
Molecular Formula:	C ₂₆ H ₂₄ N ₂ O ₄		
Molecular Weight:	428.48		
Target:	Prostaglandin Receptor		
Pathway:	GPCR/G Protein		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (116.69 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.3338 mL	11.6692 mL	23.3383 mL
	5 mM	0.4668 mL	2.3338 mL	4.6677 mL
	10 mM	0.2334 mL	1.1669 mL	2.3338 mL

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

BIOLOGICAL ACTIVITY

Description

ONO 1301 (ONO-AP 500-02), a prostaglandin (PG) I₂ mimetic, is an orally active, long-acting prostacyclin agonist with thromboxane-synthase inhibitory activity. ONO 1301 promotes production of hepatocyte growth factor (HGF) from various cell types and ameliorates ischemia-induced left ventricle dysfunction in the mouse, rat and pig^{[1][2][3]}.

In Vitro

ONO 1301 (ONO-AP 500-02) inhibits collagen-induced aggregation in a concentration-dependent manner, with an IC₅₀ value of 460 nM^[3].
 ONO-1301 (0-1000 nM) significantly increases alkaline phosphatase (ALP) activity in the primary osteoblasts and ST2 cells^[3].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

ONO-1301 (6 mg/kg; p.o.; /daily for 4 weeks) improves the hemodynamic status of rats with dilated cardiomyopathy after experimental autoimmune myocarditis^[1].

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Animal Model:	Eight-week-old male Lewis rats (rat model of myosin-induced experimental autoimmune myocarditis) ^[1]
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Dosage:	6 mg/kg
Administration:	Orally; /daily for 4 weeks
Result:	Hemodynamic parameters and plasma brain natriuretic peptide (BNP) level were significantly improved.

REFERENCES

- [1]. Hirata Y, et al. Beneficial effect of a synthetic prostacyclin agonist, ONO-1301, in rat autoimmune myocarditis model. *Eur J Pharmacol.* 2013;699(1-3):81-87.
- [2]. Kashiwagi H, et al. The novel prostaglandin I2 mimetic ONO-1301 escapes desensitization in an antiplatelet effect due to its inhibitory action on thromboxane A2 synthesis in mice. *J Pharmacol Exp Ther.* 2015;353(2):269-278.
- [3]. Kanayama S, et al. ONO-1301 Enhances in vitro Osteoblast Differentiation and in vivo Bone Formation Induced by Bone Morphogenetic Protein. *Spine (Phila Pa 1976).* 2018;43(11):E616-E624.
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Caution: Product has not been fully validated for medical applications. For research use only.

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