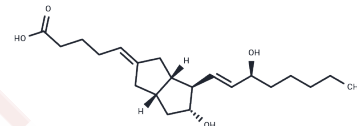


Carbacyclin

Chemical Properties

CAS No. :	69552-46-1
Formula:	C ₂₁ H ₃₄ O ₄
Molecular Weight:	350.49
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	Carbacyclin, a PGI ₂ analog, is a prostacyclin (PGI ₂) receptor agonist and vasodilator with potent inhibitory platelet aggregation.
Targets(IC50)	Others,PPAR,Prostaglandin Receptor
In vitro	Carbacyclin acts as an inhibitor of platelet aggregation induced by ADP or collagen in vitro[2]. It also enhances CPT-1 mRNA expression through PPAR δ , independent of the IP receptor signaling pathway. Furthermore, Carbacyclin, within the concentration range of 0.02 μ M to 20 μ M, activates the IP receptor signaling pathway through PKA, an effect that is blocked by H-89, a PKA inhibitor. Additionally, Carbacyclin, at concentrations ranging from 0.02 to 80 μ M, increases PPRE promoter activity via PPAR δ in cardiomyocytes, again independent of the IP receptor pathway[3].
In vivo	Carbacyclin exhibits 0.03 times the activity of prostacyclin in inhibiting platelet aggregation in human, rabbit, or dog plasma [2]. Additionally, in the murine heart, Carbacyclin (100 μ g, i.p.) induces CPT-1 mRNA expression [3].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8531 mL	14.2657 mL	28.5315 mL
5 mM	0.5706 mL	2.8531 mL	5.7063 mL
10 mM	0.2853 mL	1.4266 mL	2.8531 mL
50 mM	0.0571 mL	0.2853 mL	0.5706 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

- Takasuka M, et al. FTIR spectral study of intramolecular hydrogen bonding in thromboxane A2 receptor agonist (U-46619), prostaglandin (PG)E2, PGD2, PGF2 alpha, prostacyclin receptor agonist (carbacyclin), and their related compounds in dilute CCl4 solution: structure-activity relationships. *J Med Chem.* 1994 Jan 7;37(1):47-56.
- Whittle BJ, et al. Carbacyclin--a potent stable prostacyclin analogue for the inhibition of platelet aggregation. *Prostaglandins.* 1980 Apr;19(4):605-27.
- Kuroda T, et al. Carbacyclin induces carnitine palmitoyltransferase-1 in cardiomyocytes via peroxisome proliferator-activated receptor (PPAR) delta independent of the IP receptor signaling pathway. *J Mol Cell Cardiol.* 2007 Jul;43(1):54-62.

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