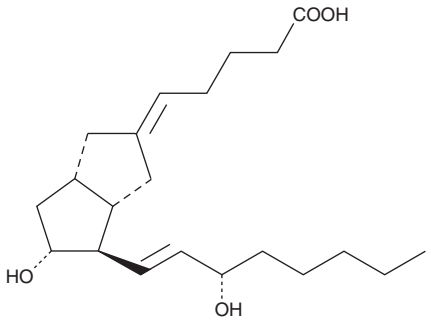
PRODUCT INFORMATION

5-*cis* Carbaprostacyclin

Item No. 18211

CAS Registry No.:	69609-77-4
Formal Name:	(5Z)-5-[(3aS,4R,5R,6aS)-hexahydro-5-hydroxy-4-[(1E,3S)-3-hydroxy-1-octenyl]-2(1H)-pentalenylidene]-pentanoic acid
Synonym:	(5Z)-6a-Carbaprostaglandin I_2
MF:	$C_{21}H_{34}O_4$
FW:	350.5
Purity:	≥99%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

5-*cis* Carbaprostacyclin is supplied as a crystalline solid. A stock solution may be made by dissolving the 5-*cis* carbaprostacyclin in the solvent of choice, which should be purged with an inert gas. 5-*cis* Carbaprostacyclin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 5-*cis* carbaprostacyclin in these solvents is approximately 20, 5, and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 5-*cis* carbaprostacyclin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 5-*cis* carbaprostacyclin in PBS (pH 7.2) is approximately 0.08 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

5-*cis* Carbaprostacyclin is a stable analog of PGI_2 and an isomer of carbaprostacyclin. It is a weak inhibitor of human platelet aggregation with an IC_{50} of 2.8 µM compared to 0.3 µM for carbaprostacyclin.[1,2] 5-*cis* Carbaprostacyclin is a much weaker effector of rabbit mesenteric artery relaxation with an EC_{50} of 104 µM compared to 5.9 µM for carbaprostacyclin. It even antagonizes the adenylate cyclase activation induced by carbaprostacyclin.[2]

References

1. Whittle, B.J.R., Moncada, S., Whiting, F., *et al.* Carbacyclin — a potent stable prostacyclin analogue for the inhibition of platelet aggregation. *Prostaglandins* **19(4)**, 605-627 (1980).
2. Corsini, A., Folco, G.C., Fumagalli, R., *et al.* (5Z)-carbacyclin discriminates between prostacyclin-receptors coupled to adenylate cyclase in vascular smooth muscle and platelets. *Br. J. Pharmacol.* **90(1)**, 255-261 (1987).

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