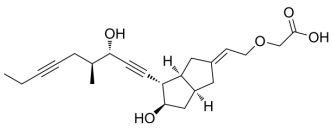
Cicaprost

Cat. No.:	HY-19583
CAS No.:	94079-80-8
Molecular Formula:	$C_{22}H_{30}O_5$
Molecular Weight:	374.47
Target:	Prostaglandin Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Cicaprost (ZK 96480) is a prostacyclin receptor (IP) agonist. Cicaprost causes a concentration-dependent relaxation of the artery with an EC_{50} of 5.8 nM [1].
IC_{50} & Target	IP

In Vitro

Cicaprost significantly reduces proliferation of human pulmonary artery smooth muscle cells (HPASMC) stimulated by fetal bovine serum (FBS). Cicaprost displays marked antiproliferative activity at 30 nM[2].
Cicaprost stimulates [^{3}H]cyclic AMP production with EC_{50} values of 1.5-22 nM, and stimulates [^{3}H]inositol phosphate production (EC_{50} values 49-457 nM) in all but the SK-N-SH cells[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[2]

Cell Line:	HPASMC
Concentration:	10 pM, 100 pM, 1 nM, 10 nM, 100 nM, 1 μM, and 10 μM
Incubation Time:	
Result:	Dose-dependently inhibited proliferation with an EC_{50} of 24.1 nM.

In Vivo

Cicaprost alters pain perception and inflammatory response in mice lacking prostacyclin receptor. Intravenous injection of Cicaprost (1 μg/kg) causes hypotension of -30 mm Hg in anaesthetized wild-type mice[4].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Wild-type (+/+) and $IP^{-/-}$ mice[4]
Dosage:	1 μg/kg
Administration:	Intravenous injection
Result:	Caused hypotension of 30 mm Hg in anaesthetized wild-type mice, whereas there was no change in blood pressure in IP-deficient mice even at 10 μg/kg.

REFERENCES

[1]. Nicole Ferko, et al. NO synergism with cicaprost in the canine pulmonary artery. BioPharm Journal ONLINE 2:2 (1998).

[2]. Lucie H Clapp, et al. Differential effects of stable prostacyclin analogs on smooth muscle proliferation and cyclic AMP generation in human pulmonary artery. Am J Respir Cell Mol Biol. 2002 Feb;26(2):194-201.

[3]. Kevin B S Chow, et al. Protein kinase A-dependent coupling of mouse prostacyclin receptors to Gi is cell-type dependent. Eur J Pharmacol. 2003 Aug 1;474(1):7-13.

[4]. T Murata, et al. Altered pain perception and inflammatory response in mice lacking prostacyclin receptor. Nature. 1997 Aug 14;388(6643):678-82.

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