Taprostene

Cat. No.: HY-114671

CAS No.: 108945-35-3

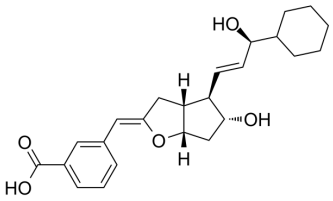
Molecular Formula: $C_{24}H_{30}O_5$

Molecular Weight: 398.49

Target: Prostaglandin Receptor

Pathway: GPCR/G Protein

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Taprostene (CG-4203) is a synthetic, chemically stable analogue of Prostacyclin (PGI2). Taprostene exhibits endothelium and myocardial protecting actions after acute myocardial ischemia and reperfusion in cats. Taprostene enhances cytoprotective actions, while minimizing unwanted hemodynamic effects[1].
IC_{50} & Target	Prostaglandin Receptor[1]
In Vivo	Taprostene (100 ng/kg/min) is infused intravenously starting 30 minutes postocclusion of the left anterior descending coronary artery followed by reperfusion 1 hour later in a 6-hour model of myocardial ischemia (MI) with reperfusion in anesthetized cats. Taprostene infusion results in significantly lower plasma creatine phosphokinase activities for the MI + Taprostene group compared with the MI + vehicle group.Taprostene has a profile of activity including prevention of aggregation in cat platelets15 at concentrations that are much lower than that required to produce significant vasodilator activity in rabbit aortic rings. In addition to antiaggregatory and cytoprotective effects in circulatory shock, Taprostene exerts beneficial effects in acute inflammatory states and in rat models of myocardial hypoxia and permanent ischemia.A variety of infusion rates of Taprostene from 50 to 200 ng/kg/min were initially used to obtain an infusion rate that produced minimal hemodynamic (i.e., vasodilator) effects but still exerted cardioprotective effects. Taprostene treatment inhibits neutrophils adhering to the myocardial endothelium in both jeopardized and necrotic myocardial tissue after ischemia and reperfusion[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Adult male cats (2.5-3.5 kg)[1]
Dosage:	100 ng/kg
Administration:	Infused intravenously at a rate of 100 ng/kg/min until the end of the experiment (i.e., for 5.5 hours).
Result:	In six cat aortic rings, 1-100 ng/mL failed to exert any vasorelaxant effect. Relaxed the vascular rings 34% at 300 ng/mL. The EC_{50} was 520 ng/mL, a value 26 times that of its antiplatelet aggregatory effect in cat platelet-rich plasma.

REFERENCES

[1]. G Johnson 3rd, et al. Endothelium and myocardial protecting actions of Taprostene, a stable prostacyclin analogue, after acute myocardial ischemia and reperfusion in cats. Circ Res. 1990 May;66(5):1362-70.

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