Balanol

Cat. No.: HY-121197

CAS No.: 63590-19-2

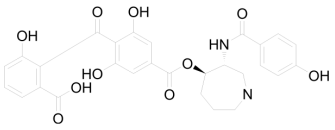
Molecular Formula: $C_{28}H_{26}N_2O_{10}$

Molecular Weight: 550.51

Target: PKA; PKC

Pathway: Stem Cell/Wnt; Epigenetics; TGF-beta/Smad

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



BIOLOGICAL ACTIVITY

Description	Balanol (Ophiocordin; Azepinostatin) is a potent and ATP competitive PKC/PKA inhibitor against human PKC isozymes α, β-I, β-II, γ, δ, ε, η (IC_{50}s=4-9 nM) and ζ (IC_{50}=150 nM). Balanol also blocks the phosphorylation of cyclic AMP response element-binding protein (CREB) and myristoylated alanine-rich C kinase substrate (MARCKS). Balanol can be isolated from the fungus Verticillium balanoides[1][2].			
IC_{50} & Target	Human PKCα 4-9 nM	PKC-βI 4-9 nM	PKC-βII 4-9 nM	Human PKCγ 4-9 nM
	Human PKCδ 4-9 nM	Human PKCε 4-9 nM	human PKCη 150 nM	PKA
In Vitro	Balanol (3 μM; 45 min) inhibits PKA, as inhibiting the induction of luciferase activity by Isoproterenol (HY-B0468) in neonatal rat myocytes A431 cells[1]. Balanol (10 μM; 45 min) inhibits the phosphorylation of CREB and MARCKS in A431 cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.			

REFERENCES

[1]. Gustafsson AB, et al. Differential and selective inhibition of protein kinase A and protein kinase C in intact cells by balanol congeners. Mol Pharmacol. 1999 Aug;56(2):377-82.

[2]. Kulanthaivel P, et al. Balanol: a novel and potent inhibitor of protein kinase C from the fungus Verticillium balanoides. Journal of the American Chemical Society, 1993, 115(14): 6452-6453.

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