Product Data Sheet

Product Name: BMY 45778
Cat. No.: GC11820

Chemical Properties

Cas. No.	152575-66-1		
Chemical Name	2-(3-(4,5-diphenyl-[2,4'-bioxazol]-5'-yl)phenoxy)acetic acid		
SMILES	OC(COC1=CC(C2=C(C3=NC(C4=CC=CC=C4)=C(C5=CC=CC=C5)O3)N=CO2)=CC=C1)=O		
Formula	$C_{26}H_{18}N_2O_5$	M.Wt	438.44
Solubility	<21.92mg/ml in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	BMY 45778		

Background

BMY 45778 is a partial agonist of prostacyclin receptor [1].

Prostacyclin receptor (IP1) is a G-protein coupled receptor for prostacyclin. Prostacyclin inhibits platelet aggregation and elicits a potent vasodilation through binding to this receptor.

BMY 45778 is a partial agonist of prostacyclin receptor. BMY 45778 inhibited platelet aggregation with IC50 values of 35 nM, 136 nM and 1.3 μM in human, rabbit and rat, respectively. In human platelet membrane, BMY 45778 activated adenylyl cyclase with ED50 value of 6-10 nM and stimulated GTPase. Also, BMY 45778 completely inhibited the binding of Iloprost to platelet membranes with IC50 value of 7 nM. BMY 45778 inhibited iloprost-stimulated GTPase, which suggested that BMY 45778 is a partial agonist of prostacyclin receptor. In whole platelets, BMY 45778 increased cAMP levels and activated cAMP-dependent protein kinase [1]. BMY 45778 (1-10 μM) inhibited rat neutrophil aggregation induced by N-formyl-methionyl-leucylphenylalanine with IC50 value of 20 nM and inhibited the spontaneous activity of rat colon by 10-20%. Also, BMY 45778(10 μM) inhibited the inhibitory effect of cicaprost on rat colon [2].

References:
[1]. Seiler SM, Brassard CL, Federici ME, et al. [3-[4-(4,5-Diphenyl-2-oxazolyl)-5-oxazolyl]phenoxy]acetic acid (BMY 45778) is a potent non-prostanoid prostacyclin partial agonist: effects on platelet aggregation, adenylyl cyclase, cAMP levels, protein kinase, and iloprost binding. Prostaglandins, 1997, 53(1): 21-35.

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[2]. Wise H, Qian YM, Jones RL. A study of prostacyclin mimetics distinguishes neuronal from neutrophil IP receptors. Eur J Pharmacol, 1995, 278(3): 265-269.

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