Product Data Sheet

Product Name: AH 23848 (calcium salt)
Cat. No.: GC17224

Chemical Properties

Cas. No.	81496-19-7		
Chemical Name	(4Z)-*rel*-7-[(1R,2R,5S)-5-([1,1'-biphenyl]-4-ylmethoxy)-2-(4-morpholinyl)-3-oxocyclopentyl]-4-heptenoic acid, hemicalcium salt		
SMILES	O=C1C[C@H](OCC2=CC=C(C3=CC=CC=C3)C=C2)[C@H](CC/C=C\CCC([O-])=O)[C@H]1N4CCOCC4.O=C5C[C@H](OCC6=CC=C(C7=CC=CC=C7)C=C6)[C@H](CC/C=C\CCC([O-])=O)[C@H]5N8CCOCC8.[Ca+2]		
Formula	$C_{29}H_{34}NO_5$ • 1/2Ca	M.Wt	496.6
Solubility	≤5mg/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	AH 23848 (calcium salt)		

Background

AH 23848 (calcium salt) is a dual antagonist of TP1 and EP4 receptors [1][2].

The thromboxane receptor (TP), also known as the prostanoid TP receptor, is activated by thromboxane A2 (TXA2). TXA2 is an exceptionally potent inducer of platelet aggregation and of contraction of vascular and respiratory smooth muscle [1]. Prostaglandin E2 (PGE2) subtype receptors (EP) are involved in cellular proliferation and tumor development. Prostaglandin E2 (PGE2) activates four EP receptors, EP1-4. The EP4 receptor is coupled to Gs and mediates increases in cAMP concentration by activation of adenylyl cyclase [4].

AH 23848 (calcium salt) is a dual antagonist of TP1 and EP4 receptors. AH 23848 is an orally active, potent and specific thromboxane receptor-blocking drug that has a long duration of action. AH 23848 inhibited TXA2-induced platelet aggregation and

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antagonized the contraction of human bronchial smooth muscle induced by the TP agonist U-46619 with pA2 of 8.3 [1][3]. In 3T6 fibroblasts, AH-23848B induced accumulation of cells in early S phase and lowered cyclin A levels [4].

In syngeneic BALB/cByJ female mice injected with line 66.1 or 410.4 tumor cells, AH23848 inhibited the metastasis of line 66.1 and 410.4 cells [5].

References:

[1]. Brittain RT, Boutal L, Carter MC, et al. AH23848: a thromboxane receptor-blocking drug that can clarify the pathophysiologic role of thromboxane A2. Circulation. 1985 Dec;72(6):1208-18.
[2]. Coleman RA, Grix SP, Head SA, et al. A novel inhibitory prostanoid receptor in piglet saphenous vein. Prostaglandins. 1994 Feb;47(2):151-68.
[3]. Coleman RA, Sheldrick RL. Prostanoid-induced contraction of human bronchial smooth muscle is mediated by TP-receptors. Br J Pharmacol. 1989 Mar;96(3):688-92.
[4]. Sanchez, T., and Moreno, J.J. Role of EP1 and EP4 PGE2 subtype receptors in serum-induced 3T6 fibroblast cycle progression and proliferation. American Journal of Physiology.Cell Physiology 282, C280-C288 (2002).
[5]. Ma X, Kundu N, Rifat S, et al. Prostaglandin E receptor EP4 antagonism inhibits breast cancer metastasis. Cancer Res. 2006 Mar 15;66(6):2923-7.

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