Product Data Sheet

Product Name: BW-B 70C
Cat. No.: GC10709

Chemical Properties

Cas. No.	134470-38-5		
Chemical Name	(R,E)-1-(4-(3-(4-fluorophenoxy)phenyl)but-3-en-2-yl)-1-hydroxyurea		
SMILES	FC1=CC=C(C=C1)OC2=CC(/C=C/[C@@H](C)N(C(N)=O)O)=CC=C2		
Formula	$C_{17}H_{17}FN_2O_3$	M.Wt	316.33
Solubility	Limited solubility, soluble in DMSO or ethanol	Storage	Desiccate 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	BW-B 70C		

Background

BW-B 70C is a potent and selective inhibitor of 5-lipoxygenase [1].

5-lipoxygenase is an enzyme that transforms essential fatty acids (EFAs) into leukotrienes and is activated by 5-lipoxygenase activating protein (FLAP).

BW-B 70C is a potent and selective 5-lipoxygenase inhibitor. BW-B 70C had high potency and long duration in vivo and was considered as potential anti-asthma drug [1]. In sensitised guinea-pigs, BW B70C (2-50 mg/kg) inhibited bronchoconstriction induced by allergen in a dose-dependent way, which was consistent with the inhibitory activity of BW B70C against 5-lipoxygenase. Also, BW B70C (20 mg/kg) inhibited eosinophil infiltration by 67% [2]. In guinea-pigs, The 5-lipoxygenase inhibitor, BW B70C (30 mg/kg) inhibited leucocyte migration to the airways lumen, leukotriene C4 synthesis by alveolar macrophages and albumin microvascular leakage induced by endotoxin. However, BW B70C didn’t affect vascular leucocyte margination and the blood levels of secreted phospholipase A2 and TNF-α [3]. In a focal cerebral ischemia rat model, BW-B 70C

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improved neurological deficit scores and decreased infarctions. Also, BW-B 70C reduced 5-lipoxygenase (5-LOX) and inhibited inducible nitric oxide synthase (iNOS) expression through down-regulation of NF-κB [4].

References:

[1]. Payne AN, Jackson WP, Salmon JA, et al. Hydroxamic acids and hydroxyureas as novel, selective 5-lipoxygenase inhibitors for possible use in asthma. Agents Actions Suppl, 1991, 34: 189-199.

[2]. Yeadon M, Dougan FL, Petrovic A, et al. Effect of BW B70C, a novel inhibitor of arachidonic acid 5-lipoxygenase, on allergen-induced bronchoconstriction and late-phase lung eosinophil accumulation in sensitised guinea-pigs. Agents Actions, 1993, 38(1-2): 8-18.

[3]. Bureau MF, De Castro CM, Cortese C, et al. 5-Lipoxygenase and endotoxin-induced microvascular albumin exchanges and leucocyte recruitment in guinea-pig lungs. Eur J Pharmacol, 1997, 324(1): 89-98.

[4]. Jatana M, Giri S, Ansari MA, et al. Inhibition of NF-kappaB activation by 5-lipoxygenase inhibitors protects brain against injury in a rat model of focal cerebral ischemia. J Neuroinflammation, 2006, 3: 12.