
Product Data Sheet

Product Name: AL 8810
Cat. No.: GC16895

Chemical Properties

Cas. No. 246246-19-5

Chemical Name (Z)-7-((1R,2R,3S,5S)-2-((R,E)-3-(2,3-dihydro-1H-inden-2-yl)-3-hydroxyprop-1-en-1-yl)-3-fluoro-5-hydroxycyclopentyl)hept-5-enoic acid

SMILES F[C@H]1C[C@H](O)[C@H](C/C=C\CCCC(O)=O)[C@H]1/C=C/[C@H](O)C2CC3=CC=CC=C3C2

Formula C₂₄H₃₁FO₄ M.Wt 402.50

Solubility 25mg/mL in DMSO, 20mg/mL in DMF Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C 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

Background

AL-8810 is a novel prostaglandin F_{2α} analog that acts as a selective antagonist of prostaglandin F_{2α} (FP) receptor.

Prostaglandin receptors are a group of g-protein coupled receptor that exhibited a variety of functions in regulation of blood pressure and renal function; smooth muscle contraction; inhibition of plate aggregation; immune response etc.

AL-8810 has a EC₅₀ of 261 ± 44 nM against FP receptor in the A7r5 rat thoracic aorta smooth muscle cells and a EC₅₀ of 186 ± 63 nM in Swiss mouse 3T3 fibroblasts. In addition, AL-8810 antagonizes the response to 100 nM fluprostenol (K_i = 426 ± 63 nM) in a concentration- dependent manner in A7r5 cells. [1]

In the h-TM cells, AL-8810 antagonizes the (±) fluprostenol-induced PI turn over responses concentration dependently (K_i=2.56 ± 0.62 μm). AL-8810 also antagonizes

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bimatoprost, travoprost acid, latanoprost acid and travoprost acid. [2] In HCM cells, 1 μ m AL-8810 blocks the 85% PGF₂-induced MMP-2 secretion and 66% PGF₂ α -induced activation of ERK1/2. [3]

References:

1. Griffin BW, Klimko P, Crider JY, Sharif NA. AL-8810: a novel prostaglandin F₂ alpha analog with selective antagonist effects at the prostaglandin F₂ alpha (FP) receptor. J Pharmacol Exp Ther. 1999 Sep;290(3):1278-84.
2. Husain S, Jafri F, Crosson CE. Acute effects of PGF₂alpha on MMP-2 secretion from human ciliary muscle cells: a PKC- and ERK-dependent process. Invest Ophthalmol Vis Sci. 2005 May;46(5):1706-13.
3. Sharif NA, Kelly CR, Crider JY. Human trabecular meshwork cell responses induced by bimatoprost, travoprost, unoprostone, and other FP prostaglandin receptor agonist analogues. Invest Ophthalmol Vis Sci. 2003 Feb;44(2):715-21.

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