PRODUCT INFORMATION

CAY10598
Item No. 13281

CAS Registry No.: 346673-06-1
Formal Name: 5-[(3S)-3-hydroxy-4-phenyl-1-buten-1-yl]1-[6-(2H-tetrazol-5-R-yl)hexyl]-2-pyrrolidinone
MF: C_{21}H_{29}N_{5}O_{2}
FW: 383.5
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 year

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

CAY10598 is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of CAY10598 in these solvents is approximately 12.5 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of CAY10598 is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of CAY10598 in PBS, pH 7.2, is approximately 1.4 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Prostaglandin E\textsubscript{2} (PGE\textsubscript{2}) activates four E prostanoid (EP) receptors, EP\textsubscript{1-4}. EP\textsubscript{4} is a \(G_{s}\) protein-coupled receptor that, by elevating the second messenger cAMP, plays important roles in bone formation and resorption, cancer, and atherosclerosis.\(^1\)\(^-\)\(^3\) CAY10598 is a very potent agonist of EP\textsubscript{4}, binding with a \(K_{i}\) value of 1.2 nM.\(^4\) Moreover, it does not bind EP\textsubscript{1}, EP\textsubscript{2}, EP\textsubscript{3}, or other prostanoid receptors, including DP, FP, IP, and TP.\(^4\) First generation EP\textsubscript{4} receptor-selective agonists have been shown to reduce inflammation, improve bone healing, provide cardio- and neuroprotection, and reduce renal dysfunction, suggesting some clinical applications for EP\textsubscript{4} agonists.\(^5\)\(^-\)\(^9\)

References