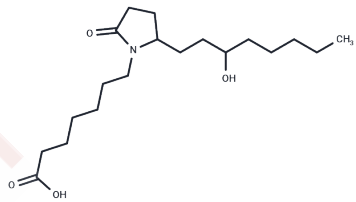
Data Sheet (Cat.No.T40738)

TargetMol

CAY10580

Chemical Properties



CAS No. : 64054-40-6

Formula: C19H35NO4

Molecular Weight: 341.49

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	CAY10580 is a selective prostaglandin EP4 receptor agonist (Ki=35 nM) and PGE2 analog that prevents diet-induced hypercholesterolemia.
Targets(IC50)	Prostaglandin Receptor
In vitro	CAY10580 (200 μg/kg; intraperitoneal injection; once daily for three weeks) prevents diet-induced hypercholesterolemia by enhancing endogenous bile acid synthesis and fecal excretion [3].
In vivo	CAY10580, administered intraperitoneally at a dosage of 200 μg/kg body weight daily for three weeks, effectively combats diet-induced hypercholesterolemia, promotes endogenous bile acid synthesis, and increases their excretion in feces. In a study using six-week-old male EP4 +/+ mice challenged with a high-fat diet, these mice exhibited a 28.5% reduction in total cholesterol levels compared to the control group, with levels decreasing from 137.4 to 98.2 mg/dl, thereby nearly normalizing plasma cholesterol concentrations.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9283 mL	14.6417 mL	29.2834 mL
5 mM	0.5857 mL	2.9283 mL	5.8567 mL
10 mM	0.2928 mL	1.4642 mL	2.9283 mL
50 mM	0.0586 mL	0.2928 mL	0.5857 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Billot X, et al. Discovery of a potent and selective agonist of the prostaglandin EP4 receptor. Bioorg Med Chem Lett. 2003;13(6):1129-1132.
Olesen ET, et al. Vasopressin-independent targeting of aquaporin-2 by selective E-prostanoid receptor agonists alleviates nephrogenic diabetes insipidus. Proc Natl Acad Sci U S A. 2011;108(31):12949-12954.
Ying F, et al. EP4 emerges as a novel regulator of bile acid synthesis and its activation protects against hypercholesterolemia. Biochim Biophys Acta Mol Cell Biol Lipids. 2018;1863(9):1029-1040.

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