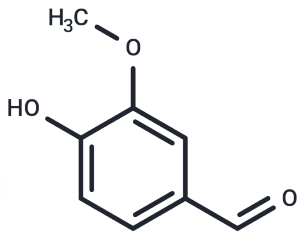
Data Sheet (Cat.No.T6717)

TargetMol

Vanillin

Chemical Properties



CAS No. : 121-33-5

Formula: C8H8O3

Molecular Weight: 152.15

Storage: Keep away from moisture
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	Vanillin (Zimco) is a single molecule extracted from vanilla beans and also a popular odor used widely in perfume, food and medicine.Vanillin can reversibly and non-competitively inhibit the cellulase activity at appropriate concentrations and the value of IC50 was estimated to be 30 g/L.Vanillin protects KSC from UVB irradiation and its effects may occur through the suppression of downstream step of MDM2 in UVB irradiation-induced p53 activation. Vanillin also inhibits yeast growth and fermentation.
Targets(IC50)	Endogenous Metabolite
In vivo	The Vanillin with LD50 by oral is 1.58 g/ kg, 1.40 g/kg, 3.0 g/kg for rats,guinea pigs, rabbits,respectively.Several studies of oral toxicity in rats have reported that Vanillin is consumed in many cycles without side effects.
Kinase Assay	Ligand Binding Assay: To determine the binding affinity of T0070907 to the PPARs, scintillation proximity assay (SPA) is performed with the following modifications. A 90-µl reaction contains SPA buffer (10 mm KH2PO4, 10 mm KH2PO4, 2 mm EDTA, 50 mm NaCl, 1 mm dithiothreitol, 2 mmCHAPS, 10% (v/v) glycerol, pH 7.1), 50 ng of GST-PPARγ (or 150 ng of GST-PPARα, GST-PPARδ), 5 nm 3H-labeled radioligands, and 5 µl of T0070907 in Me2SO. After incubation for 1 h at room temperature, 10 µl of polylysine-coated SPA beads (at 20 mg/ml in SPA buffer) are added, and the mixtureis incubated for 1 h before reading in Packard Topcount. [3H]Rosiglitazone is used for PPARγ, and [3H]GW2433 is used for PPARα and PPARδ.

Solubility Information

Solubility	Ethanol: 28 mg/mL (184.03 mM),Sonication is recommended. DMSO: 240 mg/mL (1577.39 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (32.86 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.5725 mL	32.8623 mL	65.7246 mL
5 mM	1.3145 mL	6.5725 mL	13.1449 mL
10 mM	0.6572 mL	3.2862 mL	6.5725 mL
50 mM	0.1314 mL	0.6572 mL	1.3145 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

Abraham DJ, et al. Blood, 1991, 77(6), 1334-1341.
Shim K S, Hwang Y H, Jang S A, et al. Ethanol Extract of Amomum tsao-ko Ameliorates Ovariectomy-Induced Trabecular Loss and Fat Accumulation. Molecules. 2021 Feb 3;26(4):784. doi: 10.3390/molecules26040784.
Shim K S, Hwang Y H, Jang S A, et al. Ethanol Extract of Amomum tsao-ko Ameliorates Ovariectomy-Induced Trabecular Loss and Fat Accumulation[J]. Molecules. 2021, 26(4): 784.