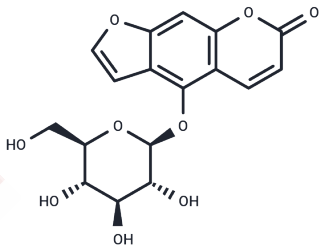
Data Sheet (Cat.No.TN6432)

TargetMol

Bergaptol O-β-D-glucopyranoside

Chemical Properties



CAS No. : 131623-13-7

Formula: C17H16O9

Molecular Weight: 364.3

Storage: 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	Bergaptol O-β-D-glucopyranoside is a natural product for research related to life sciences. The catalog number is TN6432 and the CAS number is 131623-13-7.
In vitro	To study the absorption and transportation characteristic of xanthotoxol (1), xanthotoxin (2), imperatorin (3), isoimperatorin (4), cnidilin (5), and isopimpinellin (6), which were classified as the linear type furocoumarins, in a model of Caco-2 cell monolayers in human intestinal epithelium. Methods: Caco-2 (the human colon adenocarcinoma cell lines) cell monolayer was used as an intestinal epithelial cell model. The permeability of the six coumarins from apical side (AP side) to basolateral side (BL side) or from BL side to AP side was evaluated. The concentration of the six coumarins was measured by HPLC coupled with UV detector. Transportation parameters and permeability coefficients (Papp) were then calculated, and P app values were compared with the reported values for model compounds, Propranolol and Atenolol. Based on the absorption and transportation characteristic of coumarins 1-6, and psoralen (7), bergaptol (8), bergaptol-O-β-D-glucopyranoside (Bergaptol-beta-glucopyranoside ,9), bergapten (10), nodakenin (11), nodakenetin (12), decuroside V (13), umbelliferone (14), osthole (15), angelol-A (16), and angelol-B (17) in a model of Caco-2 cell monolayer, the relationship of absorption and transportation with diversed chemical structures and lipophilicity was reviewed. In the Caco-2 cell monolayer model, the Papp magnitudes of the linear furocoumarins 1-6 were 10-5 cm/s in the bi-directional transport, which was identical with Propranolol. And the permeability of Caco-2 cell monolayer is mainly via passive absorption. CONCLUSIONS:The above-mentioned linear furocoumarins 1-6 are well-absorbed compounds. The results show that a significant Sigmoid dependence of permeability on 1g Papp AP→BL and 1g D at pH 7.35 of all 1-17 furocoumarins can be absorbed across intestinal epithelial cells by passive diffusion mechanism.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.745 mL	13.725 mL	27.4499 mL
5 mM	0.549 mL	2.745 mL	5.490 mL
10 mM	0.2745 mL	1.3725 mL	2.745 mL
50 mM	0.0549 mL	0.2745 mL	0.549 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

Absorption and transportation characteristic of six linear furocoumarins in a model of Caco-2 cell monolayer in human intestine. Chinese Traditional and Herbal Drugs, 2011,42(1):96-102.