Data Sheet (Cat.No.TN1089)

TargetMol
A DRUG SCREENING EXPERT

Hydroxy-beta-sanshool

Chemical Properties

CAS No.:	97465-69-5
Formula:	C16H25NO2
Molecular Weight:	263.38
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Hydroxy-α²-sanshool is a pungent compound, it can cause oral numbness.
Targets(IC_{50})	others: None
In vitro	Saliva flow measurements and SDS-PAGE separation of human whole saliva freshly collected after oral stimulation with citric acid (sour), aspartame (sweet), iso-α±-acids (bitter), mono sodium l-glutamate (umami), NaCl (salty), 6-gingerol (pungent), hydroxy-α±-sanshool (tingling), and Hydroxy-beta-sanshool (numbing), followed by tryptic digestion, nano-HPLC-MS/MS, and label-free protein quantitation demonstrated a stimulus- and time-dependent influence of the dietary chemosensates on salivation and the salivary proteome composition. Gene ontology enrichment analysis showed evidence for stimulus-induced alterations of the saliva proteome to boot an efficient molecular defense network of the oral cavity, e.g., 6-gingerol increased salivary lactoperoxidase activity, catalyzing the oxidation of thiocyanate to produce the antimicrobial and antifungal hypothiocyanate, from 0.37 ± 0.02 to 0.91 ± 0.05 mU/mL 45 s after stimulation. In comparison, oral citric acid stimulation induced an increase of myeloperoxidase activity, catalyzing the chloride oxidation to generate antimicrobial hypochloride in saliva, from 0.24 ± 0.04 to 0.70 ± 0.1 mU/mL as well as an increase of salivary levels of lysozyme, exhibiting antimicrobial activity on Gram-positive bacteria, from 6.0-10 to 100-150 μg/mL.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.797 mL	18.984 mL	37.968 mL
5 mM	0.759 mL	3.797 mL	7.594 mL
10 mM	0.38 mL	1.898 mL	3.797 mL
50 mM	0.076 mL	0.38 mL	0.759 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Dynamic Proteome Alteration and Functional Modulation of Human Saliva Induced by Dietary Chemosensory Stimuli.J Agric Food Chem. 2018 Jun 6;66(22):5621-5634.

Tel:781-999-4286 E-mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481