Perillartine

Cat. No.: HY-N2084

CAS No.: 30950-27-7

Molecular Formula: $C_{10}H_{15}NO$

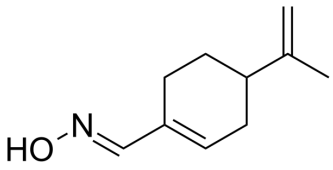
Molecular Weight: 165.23

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (605.22 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	6.0522 mL	30.2609 mL	60.5217 mL
5 mM	1.2104 mL	6.0522 mL	12.1043 mL
10 mM	0.6052 mL	3.0261 mL	6.0522 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (15.13 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (15.13 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (15.13 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Perillartine is a sweetener, which activates the taste receptor type 1 member 2 (Tas1r2) subunit in a species-dependent manner.

IC_{50} & Target

Human Endogenous Metabolite

In Vitro	The responses of the monomeric Tas1r2 subunits of human, rhesus monkey, squirrel monkey and mouse to Perillartine are examined, respectively. The human, rhesus monkey and squirrel monkey Tas1r2 subunits can be activated by Perillartine, while mouse Tas1r2 can not. The insensitivity of human, rhesus monkey, squirrel monkey and mouse Tas1r2 subunits to cyclamate precludes the probable involvement of Tas1r3 subunit in the assay. Replacement of the mouse Tas1r2 with rhesus monkey Tas1r2 (rhTas1r2/mTas1r3) leads to a gain of response to Perillartine. The dose-response curve show the efficacy of responses of the Tas1r2 subunits among species: hTAS1R2>rhTas1r2>smTas1r2>mTas1r2. These results demonstrate that the monomeric Tas1r2 subunit can be activated by Perillartine in a species-dependent manner[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Cai C, et al. Characterization of the Sweet Taste Receptor Tas1r2 from an Old World Monkey Species Rhesus Monkey and Species-Dependent Activation of the Monomeric Receptor by an Intense SweetenerPerillartine. PLoS One. 2016 Aug 1;11(8):e0160079.

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