

## Vutiglabridin

## Chemical Properties

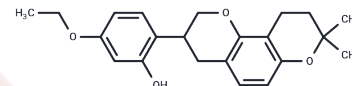
CAS No. : 1800188-47-9

Formula: C<sub>22</sub>H<sub>26</sub>O<sub>4</sub>

Molecular Weight: 354.44

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	Vutiglabridin (HSG4112) is a novel and safe modulator of PON2, a racemic compound. vutiglabridin is an optimized structural analogue of Glabridin and is superior to Glabridin in terms of weight loss and chemical stability. vutiglabridin ameliorates mptp-induced neurodegeneration in Parkinson's disease mice by targeting mitochondrial paraoxonase-2. Vutiglabridin is a clinical phase 2 drug for the treatment of obesity and has therapeutic effects on p-mitochondrial PON2 in a PD model. vutiglabridin penetrates the brain, binds PON2, and restores 1-methyl-4-phenylpyridine (MPP*)-induced neuroblastoma in SH-SY5Y Vutiglabridin significantly attenuated 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)-induced dyskinesia and dopaminergic neuronal damage in mice modeled with PD in mouse experiments.
Targets(IC50)	Others,Antibacterial,Phosphatase,PPAR,ROS
In vivo	Vutiglabridin (orally administered with 10, 30, or 100 mg/kg dose for 6 weeks) dose-dependently reduces body weight and normalizes obesity-related parameters in high-fat diet (HFD)-induced obese mice. Led to significant dose-dependent body weight reduction by 4.0 g (8.3%), 10 g (21%), and 19 g (40%), respectively, compared to the 48.1 g body weight of HFD-induced obese mice administered with only the vehicle at 10, 30, and 100 mg/kg. Vutiglabridin fully reverses adiposity in HFD-induced obese mice in a dose-dependent manner.[2]

## Solubility Information

Solubility	DMSO: 10 mg/mL (28.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.8214 mL	14.1068 mL	28.2135 mL
5 mM	0.5643 mL	2.8214 mL	5.6427 mL
10 mM	0.2821 mL	1.4107 mL	2.8214 mL
50 mM	0.0564 mL	0.2821 mL	0.5643 mL

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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

- Bae IY, et al. Species Differences in Stereoselective Pharmacokinetics of HSG4112, A New Anti-Obesity Agent. *Pharmaceutics*. 2020;12(2):127.
- Choi LS, et al. Discovery and preclinical efficacy of HSG4112, a synthetic structural analog of glabridin, for the treatment of obesity. *Int J Obes (Lond)*. 2021;45(1):130-142.
- Sulaiman D, et al. Vutiglavidin Modulates Paraoxonase 1 and Ameliorates Diet-Induced Obesity in Hyperlipidemic Mice. *Biomolecules*. 2023;13(4):687.
- Na JY, et al. Safety, tolerability, pharmacokinetic, and pharmacodynamic characteristics of vutiglavidin: A first-in-class, first-in-human study. *Clin Transl Sci*. 2022;15(11):2744-2757.

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