

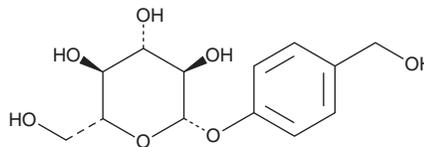
PRODUCT INFORMATION



Gastrodin

Item No. 28828

CAS Registry No.: 62499-27-8
Formal Name: 4-(hydroxymethyl)phenyl β-D-glucopyranoside
MF: C₁₃H₁₈O₇
FW: 286.3
Purity: ≥98%
UV/Vis.: λ_{max}: 223 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Gastrodia elata*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Gastrodin is supplied as a crystalline solid. A stock solution may be made by dissolving the gastrodin in the solvent of choice, which should be purged with an inert gas. Gastrodin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of gastrodin in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of gastrodin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of gastrodin in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Gastrodin is a phenolic glycoside that has been found in *Gastrodia* and has diverse biological activities.¹⁻⁴ It reduces cell death of rat hippocampal neurons and BV-2 mouse microglia induced by amyloid-β (1-42) (Aβ₄₂; Item No. 20574) and improves learning and memory in various transgenic mouse models of Alzheimer's disease.¹ It reduces motor deficits and loss of dopaminergic neurons in a rat model of Parkinson's disease induced by 6-OHDA (Item No. 25330). Gastrodin (50-200 mg/kg) reduces seizure duration and intensity in a rat model of pentylenetetrazole-kindling chronic epileptic seizures. In a mouse model of valproic acid-induced autistic-like phenotypes, gastrodin (100 mg/kg) increases social interaction and decreases marble burying and grooming behaviors, as well as restores inhibitory synaptic transmission and GAT1 and α₅ subunit-containing GABA_A expression in the basolateral amygdala.² Gastrodin increases ultimate breaking force and bone stiffness, measures of biomechanical strength, in a rat model of osteoporosis induced by dexamethasone (Item No. 11015).³ It also inhibits ethanol-induced hepatocellular apoptosis and restores liver function in a rat model of alcoholic liver disease.⁴

References

1. Liu, Y., Gao, J., Peng, M., et al. *Front. Pharmacol.* **9:24**, (2018).
2. Wang, X., Tao, J., Qiao, Y., et al. *Front. Neurol.* **9:1052**, (2018).
3. Liu, S., Zhou, L., Yang, L., et al. *Oncotarget* **9(14)**, 11528-11540 (2018).
4. Zhang, Y., Wang, C., Yu, B., et al. *Biol. Pharm. Bull.* **41(5)**, 670-679 (2018).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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