

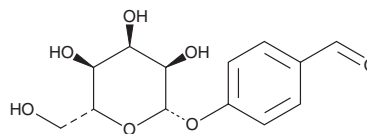
PRODUCT INFORMATION



Helicid

Item No. 33414

CAS Registry No.: 80154-34-3
Formal Name: 4-(β-D-allopyranosyloxy)-benzaldehyde
Synonym: 4-Formylphenyl β-D-Allopyranoside
MF: C₁₃H₁₆O₇
FW: 284.3
Purity: ≥95%
UV/Vis.: λ_{max}: 217, 272 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years
Item Origin: Plant/*Cavanillesia arborea*



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

Laboratory Procedures

Helicid is supplied as a crystalline solid. A stock solution may be made by dissolving the helicid in the solvent of choice, which should be purged with an inert gas. Helicid is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of helicid in these solvents is approximately 30 and 1 mg/ml, respectively.

Helicid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, helicid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Helicid has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Helicid is a β-allopyranoside originally isolated from *Helicia erratica* that has diverse biological activities.¹⁻⁴ It reverses decreases in serum corticosterone (CORT) levels and the expression of the serotonin (5-HT) receptor subtype 5-HT_{1A} in rat hippocampus in a model of chronic unpredictable mild stress-induced depression when administered at a dose of 32 mg/kg per day.² It also reverses stress-induced decreases in sucrose preference and immobility time in the forced swim test, indicating antidepressant-like activity, as well as decreases in locomotor activity, in the same model. Helicid increases the expression of the serotonin transporter (SERT) and reduces escape latency in the Morris water maze in a rat model of chronic unpredictable mild stress.³ It increases the mechanical allodynia threshold and increases non-rapid eye movement (NREM) sleep time in a manner dependent on the time-of-day of administration in a mouse model of partial sciatic nerve ligation.⁴

References

1. Chen, W.S., Lu, S.D., and Breitmaier, E. Helicid, a β-allopyranoside from *Helicia erratica* hook. *Liebigs Annalen der Chemie* **981**(10), 1893-1895 (1981).
2. Tong, J., Zhou, Z., Qi, W., et al. Antidepressant effect of helicid in chronic unpredictable mild stress model in rats. *Int. Immunopharmacol.* **67**, 13-21 (2019).
3. Li, X.-Y., Qi, W.-W., Zhang, Y.-X., et al. Helicid ameliorates learning and cognitive ability and activities cAMP/PKA/CREB signaling in chronic unpredictable mild stress rats. *Biol. Pharm. Bull.* **42**(7), 1146-1154 (2019).
4. Zhang, M.-Q., Wang, T.-X., Li, R., et al. Helicid alleviates pain and sleep disturbances in a neuropathic pain-like model in mice. *J. Sleep Res.* **26**(3), 386-393 (2017).

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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