

PRODUCT INFORMATION



Typhaneoside

Item No. 38970

CAS Registry No.: 104472-68-6
Formal Name: 3-[[O-6-deoxy- α -L-mannopyranosyl-(1 \rightarrow 2)-O-[6-deoxy- α -L-mannopyranosyl-(1 \rightarrow 6)]- β -D-glucopyranosyl]oxy]-5,7-dihydroxy-2-(4-hydroxy-3-methoxyphenyl)-4H-1-benzopyran-4-one

MF: C₃₄H₄₂O₂₀
FW: 770.7

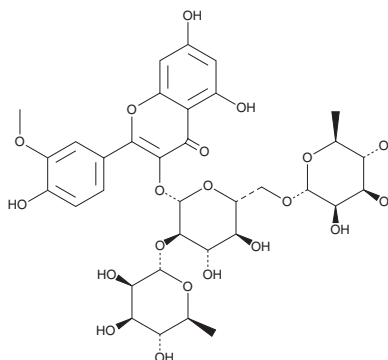
Purity: \geq 98%

Supplied as: A solid

Storage: -20°C

Stability: \geq 4 years

Item Origin: Plant/*Typha orientalis* Presl



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

Laboratory Procedures

Typhaneoside is supplied as a solid. A stock solution may be made by dissolving the typhaneoside in the solvent of choice, which should be purged with an inert gas. Typhaneoside is soluble in organic solvents such as acetonitrile and DMSO. It is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

Typhaneoside is a flavonoid glycoside that has been found in *T. angustifolia* and has diverse biological activities.¹⁻⁴ It decreases colony size and induces ferroptosis and cell cycle arrest at the G₂/M phase in Kasumi-1 and NB4 leukemia cells when used at a concentration of 40 μ M.² Typhaneoside (70 μ M) reduces LPS-induced decreases in cell viability, increases in malondialdehyde (MDA) and nitric oxide (NO) levels, and decreases in superoxide dismutase (SOD) activity in human umbilical vein endothelial cells (HUVECs).³ It limits increases in glutamate secretion and intracellular calcium levels induced by the non-specific voltage-gated potassium channel blocker 4-aminopyridine (Item No. 18511) in isolated rat cerebral synaptosomes when used at a concentration of 20 μ M.⁴ Typhaneoside, in complex with a tetrahedral framework nucleic acid (tFNA), decreases the area and severity of necrotic kidney tissue, the number of apoptotic kidney cells, blood urea nitrogen and serum creatinine levels, and increases mitochondrial membrane integrity in isolated kidney cells in a mouse model of renal ischemia-reperfusion injury induced by bilateral renal pedicle clamping.¹

References

1. Yan, R., Cui, W., Ma, W., *et al.* Typhaneoside-tetrahedral framework nucleic acids dystem: Mitochondrial recovery and antioxidation for acute kidney injury treatment. *ACS Nano* **17**(9), 8767-8781 (2023).
2. Zhu, H.-Y., Huang, Z.-X., Chen, G.-Q., *et al.* Typhaneoside prevents acute myeloid leukemia (AML) through suppressing proliferation and inducing ferroptosis associated with autophagy. *Biochem. Biophys. Res. Commun.* **516**(4), 1265-1271 (2019).
3. Chen, P., Cao, Y., Bao, B., *et al.* Antioxidant capacity of *Typha angustifolia* extracts and two active flavonoids. *Pharm. Biol.* **55**(1), 1283-1288 (2024).
4. Chiu, K.-M., Lin, T.-Y., Lee, M.-Y., *et al.* Typhaneoside suppresses glutamate release through inhibition of voltage-dependent calcium entry in rat cerebrocortical nerve terminals. *Chem. Res. Toxicol.* **34**(5), 1286-1295 (2021).

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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