

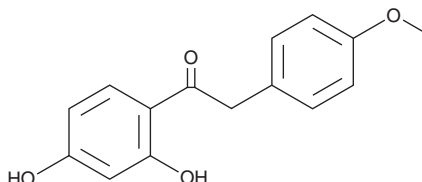
PRODUCT INFORMATION



Ononetin

Item No. 35813

CAS Registry No.: 487-49-0
Formal Name: 1-(2,4-dihydroxyphenyl)-2-(4-methoxyphenyl)-ethanone
Synonym: NSC 89759
MF: $C_{15}H_{14}O_4$
FW: 258.3
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 214, 278 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Synthetic



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

Laboratory Procedures

Ononetin is supplied as a solid. A stock solution may be made by dissolving the ononetin in the solvent of choice, which should be purged with an inert gas. Ononetin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ononetin in these solvents is approximately 12 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 ononetin can be prepared by directly dissolving the solid in aqueous buffers. The solubility of ononetin in PBS (pH 7.2) is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ononetin is a deoxybenzoin that has been found in *O. spinosa* and has diverse biological activities.^{1,2} It is an inhibitor of transient receptor potential melastatin 3 (TRPM3; $IC_{50} = 0.3 \mu\text{M}$ for the mouse receptor).¹ Ononetin scavenges DPPH (Item No. 14805), ABTS (Item No. 27317), and superoxide anion radicals in cell-free assays (IC_{50} s = 57.4, 62.64, and 35.19 μM , respectively).² It also inhibits mushroom tyrosinase activity with an IC_{50} value of 78.88 μM after 30 minutes. Ononetin (10 mg/kg) reverses heat hypersensitivity induced by complete Freund's adjuvant in mice.³

References

1. Straub, I., Mohr, F., Stab, J., et al. Citrus fruit and fabacea secondary metabolites potently and selectively block TRPM3. *Br. J. Pharmacol.* **168**(8), 1835-1850 (2013).
2. Ng, L.-T., Ko, H.-H., and Lu, T.-M. Potential antioxidants and tyrosinase inhibitors from synthetic polyphenolic deoxybenzoins. *Bioorg. Med. Chem.* **17**(13), 4360-4366 (2009).
3. Alkhatib, O., da Costa, R., Gentry, C., et al. Promiscuous G-protein-coupled receptor inhibition of transient receptor potential melastatin 3 ion channels by G $\beta\gamma$ subunits. *J. Neurosci.* **39**(40), 7840-7852 (2019).

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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