

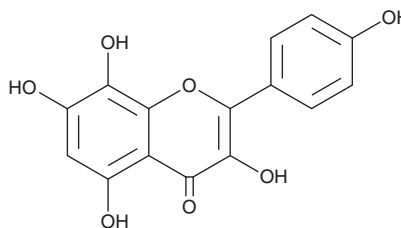
PRODUCT INFORMATION



Herbacetin

Item No. 19285

CAS Registry No.: 527-95-7
Formal Name: 3,5,7,8-tetrahydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonyms: Isoarticulatidin, 8-hydroxy Kaempferol, 3,5,7,8,4'-Pentahydroxyflavone
MF: C₁₅H₁₀O₇
FW: 302.2
Purity: ≥98%
UV/Vis.: λ_{max}: 278, 331, 386 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Herbacetin is supplied as a crystalline solid. A stock solution may be made by dissolving the herbacetin in the solvent of choice. Herbacetin is soluble in organic solvents such as ethanol DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of herbacetin in these solvents is approximately 2 mg/ml in ethanol and approximately 30 mg/ml in DMSO and DMF.

Herbacetin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, herbacetin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Herbacetin has a solubility of approximately 1 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Herbacetin is a natural product that acts as a selective inhibitor of ornithine decarboxylase (ODC).¹ It inhibits recombinant and HCT116 and HT29 colon cancer cell-derived ODC in a dose-dependent manner while having no effect on 13 tested kinases or S-adenosylmethionine decarboxylase *in vitro*. Herbacetin suppresses anchorage-independent growth, activation of activator protein-1 (AP-1), a MAP kinase transcription factor, and phosphorylation of ERK1/2 and p90^{RSK} *in vitro*. It suppresses HCT116 xenograft tumor growth in mice without significant body weight loss when administered i.p. or orally. Herbacetin also inhibits acetylcholinesterase (AChE; IC₅₀ = 1.37 μM) *in vitro*.²

References

1. Kim, D.J., Roh, E.J., Lee, M.-H., *et al.* Herbacetin is a novel allosteric inhibitor of ornithine decarboxylase with antitumor activity. *Cancer Res.* **76(5)**, 1146-1157 (2016).
2. Li, F.J., Liu, Y., Yuan, Y., *et al.* Molecular interaction studies of acetylcholinesterase with potential acetylcholinesterase inhibitors from the root of *Rhodiola crenulata* using molecular docking and isothermal titration calorimetry methods. *Int. J. Biol. Macromol.* **104(Pt. A)**, 527-532 (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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