

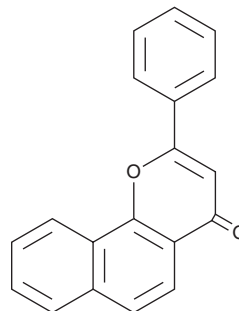
PRODUCT INFORMATION



α -Naphthoflavone

Item No. 16924

CAS Registry No.: 604-59-1
Formal Name: 2-phenyl-4H-naphtho[1,2-b]pyran-4-one
Synonyms: 7,8-Benzoflavone, NSC 407011
MF: C₁₉H₁₂O₂
FW: 272.3
Purity: \geq 98%
UV/Vis.: λ_{max} : 225, 280, 344 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

α -Naphthoflavone is supplied as a crystalline solid. A stock solution may be made by dissolving the α -naphthoflavone in the solvent of choice, which should be purged with an inert gas. α -Naphthoflavone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of α -naphthoflavone in these solvents is approximately 1, 10, and 20 mg/ml, respectively.

α -Naphthoflavone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, α -naphthoflavone should first be dissolved in DMF and then diluted with the aqueous buffer of choice. α -Naphthoflavone has a solubility of approximately 0.1 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The aryl hydrocarbon receptor (AhR) is a ligand-activated transcription factor that promotes the expression of phase I and II xenobiotic chemical metabolizing enzyme genes, including the cytochrome P450 (CYP) isoforms CYP1A1 and CYP1A2.¹ α -Naphthoflavone is a flavone that modulates xenobiotic metabolism at several points. It antagonizes AhR, blocking the expression of phase I and II genes at nanomolar concentrations, although it can agonize AhR at higher concentrations (10 μ M).^{2,3} α -Naphthoflavone inhibits CYP19 (aromatase), CYP1A1, CYP1A2, and CYP1B1 (IC₅₀s = 500, 60, 6, and 5 nM, respectively), whereas it activates CYP3A4 (K_d = 7.4 μ M).⁴⁻⁶ Dietary α -naphthoflavone can contribute to carcinogenesis in the presence of synthetic estrogens.⁷

References

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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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