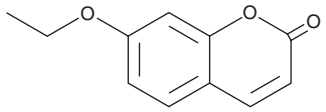
PRODUCT INFORMATION

7-Ethoxycoumarin

Item No. 31215

CAS Registry No.: 31005-02-4
Formal Name: 7-ethoxy-2H-1-benzopyran-2-one
MF: $C_{11}H_{10}O_3$
FW: 190.2
Purity: ≥98%
UV/Vis.: λ_{max}: 218, 322 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

7-Ethoxycoumarin is supplied as a crystalline solid. A stock solution may be made by dissolving the 7-ethoxycoumarin in the solvent of choice, which should be purged with an inert gas. 7-Ethoxycoumarin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of 7-ethoxycoumarin in these solvents is approximately 15 and 30 mg/ml, respectively.

7-Ethoxycoumarin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 7-ethoxycoumarin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 7-Ethoxycoumarin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

7-Ethoxycoumarin is a substrate for cytochrome P450 (CYP).[1] It undergoes O-deethylation by various CYP isoforms, including CYP1A1, -1A2, and -2B in mice and CYP2E1 in humans. 7-Ethoxycoumarin has been used in the functional characterization of CYPs in cats, rats, and isolated human cornea.[2-4]

References

1. Yamazaki, H., Inoue, K., Mimura, M., *et al.* 7-Ethoxycoumarin O-deethylation catalyzed by cytochromes P450 1A2 and 2E1 in human liver microsomes. *Biochem. Pharmacol.* **51(3)**, 313-319 (1996).
2. Okamatsu, G., Komatsu, T., Kubota, A., *et al.* Identification and functional characterization of novel feline cytochrome P450 2A. *Xenobiotica* **45(6)**, 503-510 (2015).
3. Kajbaf, M., Ricci, R., Zambon, S., *et al.* Contribution of rat intestinal metabolism to the xenobiotics clearance. *Eur. J. Drug Metab. Pharmacokinet.* **38(1)**, 33-41 (2013).
4. Kölln, C. and Reichl, S. Cytochrome P450 activity in *ex vivo* cornea models and a human cornea construct. *J. Pharm. Sci.* **105(7)**, 2204-2212 (2016).

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