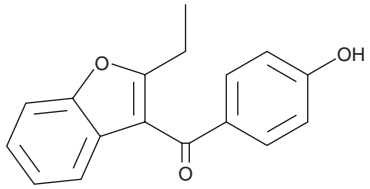
PRODUCT INFORMATION

Benzarone

Item No. 34903

CAS Registry No.:	1477-19-6
Formal Name:	(2-ethyl-3-benzofuranyl) (4-hydroxyphenyl)-methanone
Synonyms:	L 2197, NSC 82134
MF:	$C_{17}H_{14}O_3$
FW:	266.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 231, 284 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Benzarone is supplied as a solid. A stock solution may be made by dissolving the benzarone in the solvent of choice, which should be purged with an inert gas. Benzarone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of benzarone in ethanol and DMSO is approximately 10 mg/ml and approximately 30 mg/ml in DMF.

Description

Benzarone is an active metabolite of the urate anion transporter 1 (URAT1) inhibitor benzbromarone (Item No. 19768).[1,2] It inhibits URAT1 in *Xenopus* oocytes expressing the human enzyme (IC_{50} = 2.8 µM).[2] Benzarone also inhibits the tyrosine phosphatase activity of eyes absent homolog 3 (EYA3; IC_{50} = 17.5 µM), as well as reduces the proliferation and migration of human umbilical vein endothelial cells (HUVECs) when used at a concentration of 7.5 µM.[3] It uncouples oxidative phosphorylation in isolated rat liver mitochondria and induces apoptosis and necrosis in isolated rat hepatocytes.[4] Benzarone (25 µg/g) reduces tumor growth in an A-673 Ewing sarcoma mouse xenograft model.[5]

References

1. Stüber, W. and Möller, H. Determination of benzbromarone, bromobenzarone and benzarone in plasma by gas chromatography—mass spectrometry. *J. Chromatogr. B Biomed. Sci. Appl.* **224(2)**, 327-331 (1981).
2. Wempe, M.F., Jutabha, P., Quade, B., *et al.* Developing potent human uric acid transporter 1 (hURAT1) inhibitors. *J. Med. Chem.* **54(8)**, 2701-2713 (2011).
3. Pandey, R.N., Wang, T.S., Tadjuidje, E., *et al.* Structure-activity relationships of benzbromarone metabolites and derivatives as EYA inhibitory anti-angiogenic agents. *PLoS One* **8(12)**, e84582 (2013).
4. Kaufmann, P., Török, M., Hänni, A., *et al.* Mechanisms of benzarone and benzbromarone-induced hepatic toxicity. *Hepatology* **41(4)**, 925-935 (2005).
5. Wang, Y., Pandey, R.N., Roychoudhury, K., *et al.* Targeting EYA3 in ewing sarcoma retards tumor growth and angiogenesis. *Mol. Cancer Ther.* **20(5)**, 803-815 (2021).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM