

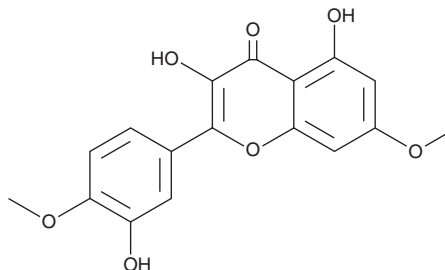
# PRODUCT INFORMATION



## Ombuin

Item No. 40217

**CAS Registry No.:** 529-40-8  
**Formal Name:** 3,5-dihydroxy-2-(3-hydroxy-4-methoxyphenyl)-7-methoxy-4H-1-benzopyran-4-one  
**Synonym:** NSC 675952  
**MF:** C<sub>17</sub>H<sub>14</sub>O<sub>7</sub>  
**FW:** 330.3  
**Purity:** ≥98%  
**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

Ombuin is supplied as a solid. A stock solution may be made by dissolving the ombuin in the solvent of choice, which should be purged with an inert gas. Ombuin is soluble in DMSO. Ombuin is slightly soluble in methanol and chloroform.

### Description

Ombuin is a flavonoid that has been found in *B. balsamifera* and has diverse biological activities.<sup>1-4</sup> It is an antagonist of M<sub>1</sub> muscarinic acetylcholine receptors (mAChRs; K<sub>i</sub> = 42 μM in CHO-K1 cells expressing the human receptor).<sup>1</sup> Ombuin is cytotoxic to HepG2 hepatocellular carcinoma cells (IC<sub>50</sub> = 1.5 μg/ml).<sup>2</sup> *In vivo*, ombuin (40 mg/kg per day) reduces blood urea and glucose levels, urinary volume and protein levels, serum creatinine levels, renal fibrosis levels, and body weight in a rat model of diabetic nephropathy induced by streptozotocin (STZ; Item No. 13104).<sup>3</sup>

### References

1. Nessa, F., Ismail, Z., Mohamed, N., et al. Free radical-scavenging activity of organic extracts and of pure flavonoids of *Blumea balsamifera* DC leaves. *Food Chem.* **88(2)**, 243-252 (2004).
2. Swaminathan, M., Chee, C.F., Chin, S.P., et al. Flavonoids with M<sub>1</sub> muscarinic acetylcholine receptor binding activity. *Molecules* **19(7)**, 8933-8948 (2014).
3. Huong, D.T., Luong, D.V., Thao, T.T.P., et al. A new flavone and cytotoxic activity of flavonoid constituents isolated from *Miliusa balansae* (Annonaceae). *Pharmazie* **60(8)**, 627-629 (2005).
4. Liu, B., Deng, C., and Tan, P. Ombuin ameliorates diabetic nephropathy in rats by anti-inflammation and antifibrosis involving Notch 1 and PPAR γ signaling pathways. *Drug Dev. Res.* **83(6)**, 1270-1280 (2022).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/15/2024

#### 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