

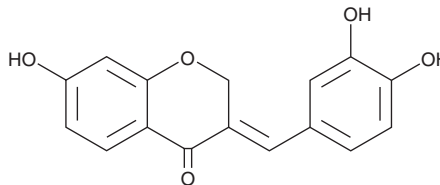
PRODUCT INFORMATION



Sappanone A

Item No. 23205

CAS Registry No.: 102067-84-5
Formal Name: 3-[(3,4-dihydroxyphenyl)methylene]-
2,3-dihydro-7-hydroxy-4H-1-
benzopyran-4-one
MF: C₁₆H₁₂O₅
FW: 284.3
Purity: ≥98%
UV/Vis.: λ_{max}: 271, 374 nm
Supplied as: A solid
Storage: 4°C
Stability: ≥2 years



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

Laboratory Procedures

Sappanone A is supplied as a solid. A stock solution may be made by dissolving the sappanone A in the solvent of choice, which should be purged with an inert gas. Sappanone A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of sappanone A in these solvents is approximately 5, 15, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of sappanone A can be prepared by directly dissolving the solid in aqueous buffers. The solubility of sappanone A in PBS, pH 7.2, is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sappanone A is a homoisoflavonoid with diverse biological activities that has been isolated from the aerial parts of *C. pulcherrima*, the heartwood of *C. sappan*, and the stems of *H. campechianum*.¹⁻⁵ *In vitro*, sappanone A inhibits 76.2, 59.2, 37.4, and 35.4% of FGFR1, KDR, c-Met, and c-Kit kinase activity, respectively, when used at a concentration of 10 μM.¹ It also inhibits influenza viral neuraminidase (NA) with IC₅₀ values of 0.7, 1.1, and 1 μM for H1N1, H3N2, and H9N2 influenza viral NAs, respectively.² Sappanone A has antibacterial activity against Gram-positive *B. subtilis*, *B. sphaericus*, and *S. aureus* as well as Gram-negative *K. aerogenes* and *C. violaceum*.³ It also inhibits the growth of *A. niger* and *C. albicans* fungi. Sappanone A inhibits LPS-induced inflammatory responses *in vitro* and *in vivo*, reducing nitric oxide (NO), interleukin-6 (IL-6), and prostaglandin E₂ (PGE₂; Item No. 14010) production in RAW264.7 cells as well as LPS-induced mortality in mice.⁴ It also attenuates airway inflammation and mucus hypersecretion via activation of the Nrf2 signaling pathway in a mouse model of ovalbumin-induced asthma.⁵

References

1. Lin, L.-G., Xie, H., Li, H.-L., et al. *J. Med. Chem.* **51**(15), 4419-4429 (2008).
2. Jeong, H.J., Kim, Y.M., Kim, J.H., et al. *Biol. Pharm. Bull.* **35**(5), 786-790 (2012).
3. Das, B.C., Thirupathi, P., Ravikanth, B., et al. *Pharm. Bull. (Tokyo)* **57**(10), 1139-1141 (2009).
4. Lee, S., Choi, S.-Y., Choo, Y.-Y., et al. *Int. Immunopharmacol.* **28**(1), 328-336 (2015).
5. Liu, X., Yu, D., and Wang, T. *Int. Arch. Allergy. Immunol.* **170**(3), 180-186 (2016).

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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