



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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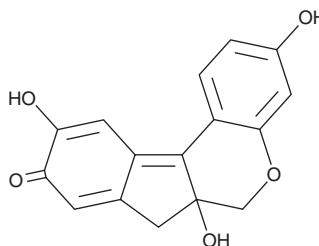
# PRODUCT INFORMATION



## Brazilein

Item No. 36736

**CAS Registry No.:** 600-76-0  
**Formal Name:** 6a,7-dihydro-3,6a,10-trihydroxy-benz[b]indeno[1,2-d]pyran-9(6H)-one  
**MF:** C<sub>16</sub>H<sub>12</sub>O<sub>5</sub>  
**FW:** 284.3  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 447 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years  
**Item Origin:** Plant/*Paubrasilia echinata*



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

### Laboratory Procedures

Brazilein is supplied as a solid. A stock solution may be made by dissolving the brazilein in the solvent of choice, which should be purged with an inert gas. Brazilein is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of brazilein in these solvents is approximately 11 mg/ml. Brazilein is also slightly soluble in ethanol.

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 brazilein can be prepared by directly dissolving the solid in aqueous buffers. The solubility of brazilein in PBS (pH 7.2) is approximately 0.16 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Brazilein is a phytochemical that has been found in *C. sappan* and has diverse biological activities.<sup>1-4</sup> It is active against *E. coli*, *P. aeruginosa*, and methicillin-susceptible *S. aureus* (MSSA; MICs = 32, 512, and 512 µg/ml), as well as a panel of 10 clinical isolates of methicillin-resistant *S. aureus* (MRSA; MIC<sub>50</sub>s = 16-32 µg/ml).<sup>1</sup> Brazilein (10 µM) inhibits LPS-induced nitric oxide (NO) production in J774A.1 cells.<sup>2</sup> It is cytotoxic to HepG2, Hep3B, MDA-MB-231, MCF-7, A549, and Ca9-22 cancer cells (IC<sub>50</sub>s = 3.15, 3.42, 2.36, 3.96, 9.68, and 8.63 µg/ml, respectively).<sup>3</sup> Brazilein (1-10 µg/ml) also inhibits the proliferation of isolated mouse spleen lymphocytes induced by concanavalin A (Item No. 14951).<sup>4</sup>

### References

1. Zuo, G.Y., Han, Z.Q., Hao, X.Y., *et al.* Synergy of aminoglycoside antibiotics by 3-benzylchroman derivatives from the chinese drug *Caesalpinia sappan* against clinical methicillin-resistant *Staphylococcus aureus* (MRSA). *Phytomedicine* **21(7)**, 936-941 (2014).
2. Sasaki, Y., Hosokawa, T., Nagai, M., *et al.* *In vitro* study for inhibition of NO production about constituents of Sappan Lignum. *Biol. Pharm. Bull.* **30(1)**, 193-196 (2007).
3. Yen, C.-T., Nakagawa-Goto, K., Hwang, T.-L., *et al.* Antitumor agents. 271: Total synthesis and evaluation of brazilein and analogs as anti-inflammatory and cytotoxic agents. *Bioorg. Med. Chem. Lett.* **20(3)**, 1037-1039 (2010).
4. Ye, M., Xie, W.-D., Lei, F., *et al.* Brazilein, an important immunosuppressive component from *Caesalpinia sappan* L. *Int. Immunopharmacol.* **6(3)**, 426-432 (2006).

#### 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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