



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Gefahrgutzuschlag
- Expressversand

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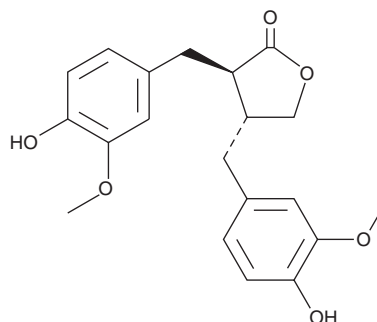
# PRODUCT INFORMATION



## Matairesinol

Item No. 10005174

**CAS Registry No.:** 580-72-3  
**Formal Name:** dihydro-3R,4R-bis[(4-hydroxy-3-methoxyphenyl)methyl]-2(3H)-furanone  
**Synonym:** (-)-Matairesinol  
**MF:** C<sub>20</sub>H<sub>22</sub>O<sub>6</sub>  
**FW:** 358.4  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 230, 282 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years  
**Item Origin:** Synthetic



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

### Laboratory Procedures

Matairesinol is supplied as a crystalline solid. A stock solution may be made by dissolving the matairesinol in the solvent of choice, which should be purged with an inert gas. Matairesinol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of matairesinol in ethanol is approximately 2 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Matairesinol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, matairesinol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Matairesinol has a solubility of approximately 0.25 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Matairesinol is a lignan that has been found in *Forsythia* and has diverse biological activities.<sup>1-5</sup> It reduces LPS-induced production of nitric oxide (NO) and prostaglandin E<sub>2</sub> (PGE<sub>2</sub>; Item No. 14010) in RAW 264.7 cells.<sup>1</sup> Matairesinol is cytotoxic to colon 26 cancer cells (LC<sub>50</sub> = 9 µg/ml).<sup>2</sup> It increases the lifespan of *C. elegans* when used at a concentration of 100 µM.<sup>3</sup> Matairesinol (0.4, 2, and 10 µM) reduces neurotoxicity in neural PC12 cells induced by oxaliplatin (Item No. 13106).<sup>4</sup> Topical administration of matairesinol (50 µg/ear) reduces ear thickness and mast cell infiltration, as well as serum IgE levels, in a mouse model of dust mite-induced atopic dermatitis.<sup>5</sup>

### References

1. Lee, J.Y., Cho, B.J., Park, T.W., *et al.* Dibenzylbutyrolactone lignans from *Forsythia koreana* fruits attenuate lipopolysaccharide-induced inducible nitric oxide synthetase and cyclooxygenase-2 expressions through activation of nuclear factor-kb and mitogen-activated protein kinase in RAW264.7 cells. *Biol. Pharm. Bull.* **33(11)**, 1847-1853 (2010).
2. Yamauchi, S., Sugahara, T., Nakashima, Y., *et al.* Effect of benzylic oxygen on the cytotoxic activity for colon 26 cell line of phenolic lignans. *Biosci. Biotechnol. Biochem.* **70(12)**, 2942-2947 (2006).
3. Su, S. and Wink, M. Natural lignans from *Arctium lappa* as antiaging agents in *Caenorhabditis elegans*. *Phytochemistry* **117**, 340-350 (2015).
4. Yi, J.-M., Shin, S., Kim, N.S., *et al.* Neuroprotective effects of an aqueous extract of *Forsythia viridissima* and its major constituents on oxaliplatin-induced peripheral neuropathy. *Molecules* **24(6)**, 1177 (2019).
5. Sung, Y.-Y., Lee, A.Y., and Kim, H.K. *Forsythia suspensa* fruit extracts and the constituent matairesinol confer anti-allergic effects in an allergic dermatitis mouse model. *J. Ethnopharmacol.* **187**, 49-56 (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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