

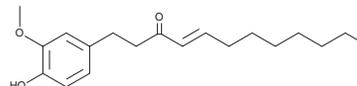
PRODUCT INFORMATION



8-Shogaol

Item No. 40273

CAS Registry No.: 36700-45-5
Formal Name: 1-(4-hydroxy-3-methoxyphenyl)-4-dodecen-3-one
MF: C₁₉H₂₈O₃
FW: 304.4
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years
Item Origin: Plant/Zingiberis Rhizoma Recens



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

Laboratory Procedures

8-Shogaol is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as methanol purged with an inert gas can be used.

Description

8-Shogaol is a phenol that has been found in *Z. officinale* and has diverse biological activities.¹⁻³ It is an inhibitor of TGF- β -activated kinase 1 (TAK1; IC₅₀ = 5.027 nM). 8-Shogaol is also an inhibitor of COX-2 (IC₅₀ = 32 μ M).² It reduces IL-17-induced secretion of IL-8 from SW 982 synovial sarcoma cells and Tnf- α from RAW 264.7 macrophages when used at a concentration of 10 μ M.² 8-Shogaol (5 or 10 μ M) decreases TNF- α -induced secretion of IL-6, IL-8, and chemokine (C-C motif) ligand 2 (CCL2) by, and reduces IL-17-induced migration and invasion of, primary human rheumatoid arthritis fibroblast-like synoviocytes. It inhibits migration and invasion induced by phorbol 12-myristate 13-acetate (PMA; Item No. 10008014) in MDA-MB-231 breast cancer cells when used at a concentration of 10 μ M.³ *In vivo*, 8-shogaol (30 mg/kg every three days) reduces paw thickness, as well as adjuvant-induced increases in joint space, synovial tissue proliferation, and cartilage damage, and improves gait without reducing body weight in a rat model of adjuvant-induced arthritis (AIA).¹

References

1. Jo, S., Samarpita, S., Lee, J.S., *et al.* 8-Shogaol inhibits rheumatoid arthritis through targeting TAK1. *Pharmacol. Res.* **178**, 106176 (2022).
2. van Breemen, R.B., Tao, Y., and Li, W. Cyclooxygenase-2 inhibitors in ginger (*Zingiber officinale*). *Fitoterapia* **82(1)**, 38-43 (2011).
3. Ling, H., Yang, H., Tan, S.H., *et al.* 6-Shogaol, an active constituent of ginger, inhibits breast cancer cell invasion by reducing matrix metalloproteinase-9 expression via blockade of nuclear factor- κ B activation. *Br. J. Pharmacol.* **161(8)**, 1763-1777 (2010).

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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