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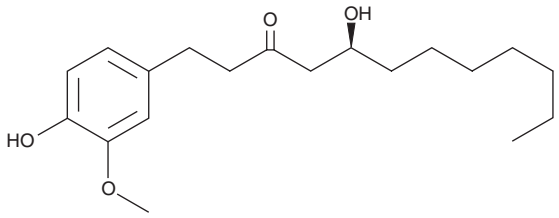
PRODUCT INFORMATION

8-Gingerol

Item No. 11841

CAS Registry No.:	23513-08-8
Formal Name:	5S-hydroxy-1-(4-hydroxy-3-methoxyphenyl)-3-dodecanone
MF:	$C_{19}H_{30}O_4$
FW:	322.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 281 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Zingiber officinale*



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

Laboratory Procedures

8-Gingerol is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-gingerol in the solvent of choice, which should be purged with an inert gas. 8-Gingerol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 8-Gingerol in ethanol and DMF is approximately 30 mg/ml and approximately 25 mg/ml in DMSO.

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 8-gingerol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 8-gingerol in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

8-Gingerol is a natural chemical found in the rhizomes of ginger (*Z. officinale*). It contains the same aromatic region and polar link but has a longer hydrophobic tail than the more abundant 6-gingerol (Item No. 11707). Like 6-gingerol, 8-gingerol activates the transient receptor potential vanilloid receptor 1 (TRPV1; EC_{50} = 5.0 µM), inhibits COX-2, and inhibits the growth of *H. pylori in vitro*.[1,2] 8-Gingerol also augments wound healing, suppresses IL-2-induced proliferation of T lymphocytes, and potentiates β-agonist-induced relaxation of airway smooth muscle.[3-5] Oral 8-gingerol is expected to be readily absorbed and rapidly metabolized by glucuronidation and sulfation, with minimal to modest effects on cytochrome P450 isoforms.[6,7]

References

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