PRODUCT INFORMATION

6-Gingerol
Item No. 11707

CAS Registry No.: 23513-14-6
Formal Name: 5S-hydroxy-1-(4-hydroxy-3-methoxyphenyl)-3-decanone
MF: C_{17}H_{26}O_{4}
FW: 294.4
Purity: ≥98%
UV/Vis.: \lambda_{\text{max}}: 282 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

6-Gingerol is supplied as a crystalline solid. A stock solution may be made by dissolving the 6-gingerol in the solvent of choice, which should be purged with an inert gas. 6-Gingerol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 6-gingerol in ethanol and DMF is approximately 30 mg/ml and 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 6-gingerol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 6-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

6-Gingerol is a natural chemical found in the rhizomes of ginger (Z. officinale). It shares the vanillyl group found on capsaicin (Item No. 92350) and, like capsaicin, activates the transient receptor potential vanilloid receptor TRPV1 (EC_{50} = 3.3 µM) as well as the TRP ankyrin receptor TRPA1 (EC_{50} = 10.4 µM).^{1}

6-Gingerol also non-competitively inhibits serotonin currents (IC_{50} = 30.3 µM) and weakly inhibits the cyclooxygenases COX-1 and COX-2 (IC_{50}s = 129 and 125 µM).^{2,3}

References


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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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