



LKT Laboratories, Inc.

## 6-Gingerol

Phone: 888-558-5227  
651-644-8424  
Fax: 888-558-7329  
Email: [getinfo@lktlabs.com](mailto:getinfo@lktlabs.com)  
Web: [lktlabs.com](http://lktlabs.com)

### Product Information

Product ID G3252

CAS No. 23513-14-6

**Chemical Name**

**Synonym**

Formula C<sub>17</sub>H<sub>26</sub>O<sub>4</sub>

Formula Wt. 294.39

**Melting Point**

Purity ≥98%

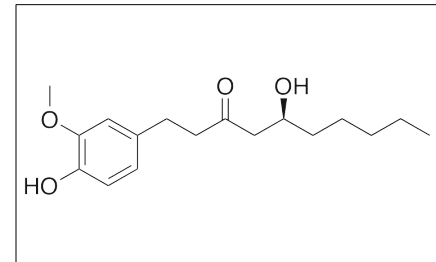
**Solubility** Soluble in ethanol, benzene, ether, chloroform, methanol (1 mg/ml), and DMSO. Insoluble in water

**Store Temp** -20° C

**Ship Temp** Ambient

**Description**

6-Gingerol is originally found in species of *Zingiber*; it that exhibits antiemetic, antacid, anticancer, anti-inflammatory, anti-obesity, antihypertensive, anti-asthma, analgesic, and antinociceptive activities. 6-Gingerol inhibits 5-HT<sub>3</sub> receptors and K<sub>2</sub>P 3.1 (TASK-1), K<sub>2</sub>P 9.1 (TASK-3), and K<sub>2</sub>P 18.1 (TRESK) K<sup>+</sup> channels. 6-Gingerol also activates transient receptor potential vanilloid 1 (TRPV1) channels, decreasing allodynia and hyperalgesia in vivo. In other models, 6-gingerol inhibits the angiotensin II type 1 (AT-II) receptor, decreasing blood pressure. This compound also induces G<sub>2</sub>/M phase cell cycle arrest and apoptosis, inhibits mitochondrial respiration, increases oxidative stress and ROS production, and inhibits proliferation in myeloid leukemia cells. Additionally, 6-gingerol inhibits IL-1 $\beta$ -induced production of COX-2, NF- $\kappa$ B, IL-6, and IL-8, suppressing hepatic inflammation in vitro. 6-gingerol also inhibits rosiglitazone-induced adipogenesis, decreasing triglyceride levels and oil droplet sizes and downregulating expression of PPAR $\gamma$ . This compound also attenuates airway hyperresponsiveness in animal models.



### Pricing and Availability

*Bulk quantities available upon request*

Product ID	Size	List Price
G3252	5 mg	\$131.00
G3252	25 mg	\$461.50

**References**

Jin Z, Lee G, Kim S, et al. Ginger and its pungent constituents non-competitively inhibit serotonin currents on visceral afferent neurons. *Korean J Physiol Pharmacol*. 2014 Apr;18(2):149-53. PMID: 24757377.

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Tzeng TF, Chang CJ, Liu IM. 6-gingerol inhibits rosiglitazone-induced adipogenesis in 3T3-L1 adipocytes. *Phytother Res*. 2014 Feb;28(2):187-92. PMID: 23519881.

Beltrán LR, Dawid C, Beltrán M, et al. The pungent substances piperine, capsaicin, 6-gingerol and polygodial inhibit the human two-pore domain potassium channels TASK-1, TASK-3 and TRESK. *Front Pharmacol*. 2013 Nov 18;4:141. PMID: 24302912.

Li XH, McGrath KC, Tran VH, et al. Attenuation of Proinflammatory Responses by S-[6]-Gingerol via Inhibition of ROS/NF-Kappa B/COX2 Activation in HuH7 Cells. *Evid Based Complement Alternat Med*. 2013;2013:146142. PMID: 23843863.

Gauthier ML, Beaudry F, Vachon P. Intrathecal [6]-gingerol administration alleviates peripherally induced neuropathic pain in male Sprague-Dawley rats. *Phytother Res*. 2013 Aug;27(8):1251-4. PMID: 22972597.

Liu Q, Liu J, Guo H, et al. [6]-gingerol: a novel AT<sub>1</sub> antagonist for the treatment of cardiovascular disease. *Planta Med*. 2013

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.