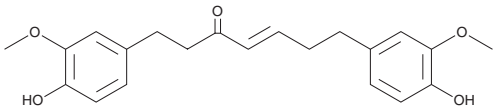
PRODUCT INFORMATION

Gingerenone A

Item No. 36841

CAS Registry No.:	128700-97-0
Formal Name:	1,7-*bis*(4E-hydroxy-3-methoxyphenyl)-4-hepten-3-one
MF:	$C_{21}H_{24}O_5$
FW:	356.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 224 nm
Supplied as:	A 50 mg/ml solution in ethanol
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Zingiber officinale* Roscoe



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

Description

Gingerenone A is a diarylheptanoid and polyphenol that has been found in *Z. officinale* and has diverse biological activities.[1-5] It inhibits tyrosinase (IC_{50} = 9.4 µM for the mushroom enzyme) and scavenges DPPH (Item No. 14805) radicals in a cell-free assay (IC_{50} = 12.6 µM).[1,2] Gingerenone A (5 and 10 µM) also inhibits JAK2 and p70 ribosomal S6 kinase 1 (p70S6K1).[3] It selectively decreases the viability of ionizing radiation-induced senescent WI38 fibroblasts over proliferating fibroblasts when used at a concentration of 20 µM.[4] Gingerenone A (50 mg/kg) prevents increases in body weight but does not affect caloric intake in a mouse model of high-fat diet-induced obesity.[5] It decreases tumor weight in an HCT116 colon cancer mouse xenograft model when administered at doses of 5 and 20 mg/kg.[3]

References

1. Athipornchai, A., Niyomtham, N., Pabuprapap, W., *et al.* Potent tyrosinase inhibitory activity of curcuminoid analogues and inhibition kinetics studies. *Cosmetics* **8(2)**, 35 (2021).
2. Li, N., Wang, L., Zu, L., *et al.* Antioxidant and cytotoxic diarylheptanoids isolated from *Zingiber officinale* rhizomes. *Chin. J. Chem.* **30**, 1351-1355 (2012).
3. Byun, S., Lim, S., Mun, J.Y., *et al.* Identification of a dual inhibitor of Janus kinase 2 (JAK2) and p70 ribosomal S6 kinase1 (S6K1) pathways. *J. Biol. Chem.* **290(39)**, 23553-23562 (2015).
4. Moaddel, R., Rossi, M., Rodriguez, S., *et al.* Identification of gingerenone A as a novel senolytic compound. *PLoS One* **17(3)**, e0266135 (2022).
5. Suk, S., Kwon, G.T., Lee, E., *et al.* Gingerenone A, a polyphenol present in ginger, suppresses obesity and adipose tissue inflammation in high-fat diet-fed mice. *Mol. Nutr. Food Res.* **61(10)** (2017).

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