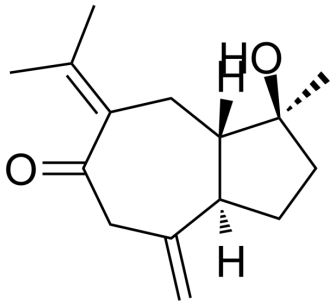
Isoprocurcumenol

Cat. No.:	HY-113599
CAS No.:	102130-90-5
Molecular Formula:	$C_{15}H_{22}O_2$
Molecular Weight:	234.33
Target:	EGFR; ERK; Akt
Pathway:	JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; MAPK/ERK Pathway; Stem Cell/Wnt; PI3K/Akt/mTOR
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Isoprocurcumenol is a guaiane type sesquiterpene, that can be isolated from Curcuma comosa. Isoprocurcumenol can activate EGFR signaling. Isoprocurcumenol increases the phosphorylation of ERK and AKT. Isoprocurcumenol promotes the proliferation of keratinocytes[1][2][3].

IC_{50} & Target	ERK	Akt

In Vitro

Isoprocurcumenol (10 μM, 0-1 h) increases the phosphorylation of ERK and AKT[3].
Isoprocurcumenol (0-200 μM, 24 or 48 h) induces the proliferation of keratinocytes HaCaT cells[3].
Isoprocurcumenol (1 μM, 1 h) increases the expression of genes related to cell growth and proliferation, such as c-fos, c-jun, c-myc, and egr-1, through activation of the EGFR signaling pathway[3].
Isoprocurcumenol induces cell recovery and wound healing[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[3]

Cell Line:	HaCaT cells (human keratinocyte cell)
Concentration:	10 μM
Incubation Time:	10, 30, or 60 min
Result:	Induced the phosphorylation of ERK and AKT after 10 min and this was sustained for 1 h.

Cell Proliferation Assay[3]

Cell Line:	HaCaT cells (human keratinocyte cell)
Concentration:	0 nM, 1 nM, 10 nM, 100 nM, 1 μM, 10 μM, 25 μM, 50 μM, 100 μM, or 200 μM
Incubation Time:	24 or 48 h
Result:	Showed a significant increase in the proliferation of cells at most of the Isoprocurcumenol concentrations, starting at 10 nM.

RT-PCR[3]

Cell Line:	HaCaT cells (human keratinocyte cell)
Concentration:	1 μM
Incubation Time:	1 h
Result:	Increased the expression of genes related to cell growth and proliferation, such as c-myc, c-jun, c-fos, and egr-1.

REFERENCES

[1]. Qu Y, et al. Sesquiterpenes from Curcuma comosa. J Nat Med. 2009 Jan;63(1):102-4.

[2]. Anuchapreeda S, et al. Cytotoxicity and inhibition of leukemic cell proliferation by sesquiterpenes from rhizomes of Mah-Lueang (Curcuma cf. viridiflora Roxb.). Bioorg Med Chem Lett. 2018 Feb 1;28(3):410-414.

[3]. Kwon PK, et al. Isoprocurcumenol Supports Keratinocyte Growth and Survival through Epidermal Growth Factor Receptor Activation. Int J Mol Sci. 2021 Nov 22;22(22):12579.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA