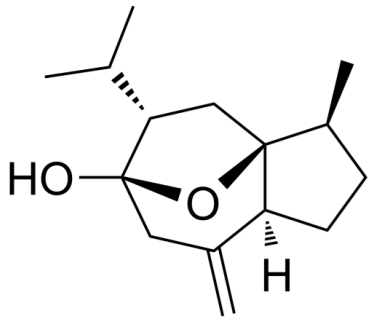
Data Sheet

Product Name:	Curcumol
Cat. No.:	CS-4168
CAS No.:	4871-97-0
Molecular Formula:	C15H24O2
Molecular Weight:	236.35
Target:	Apoptosis
Pathway:	Apoptosis
Solubility:	DMSO : ≥ 100 mg/mL (423.10 mM); H2O : < 0.1 mg/mL (insoluble)



BIOLOGICAL ACTIVITY:

Curcumol is a sesquiterpene originally isolated from curcuma rhizomes; shows anticancer activities both in vitro and in vivo. IC50 value: Target: Anticancer natural compound in vitro: Curcumol exhibited time- and concentration-dependent anti-proliferative effects in SPC-A-1 human lung adenocarcinoma cells with cell cycle arrest in the G0/G1 phase while apoptosis-induction was also confirmed with flow cytometry and morphological analyses [1]. Curcumol-induced growth inhibition correlated with apoptosis induction as evidenced by Annexin V staining, and cleavage of caspase-3 and poly (ADP-ribose) polymerase (PARP) in HSC-T6. Suppression of the NF-κB translocation via inhibition of IκB-α phosphorylation by the curcumol led to the inhibition of expression of NF-κB-regulated gene, e.g. Bcl-xL and Bcl-2, in a PI3K-dependent manner, which is upstream of NF-κB activation [2]. Curcumol exhibits an inhibitory effect on receptor activator of nuclear factor kappaB ligand (RANKL)-induced osteoclast differentiation with both bone marrow-derived macrophages and RAW264.7 cells in a dose-dependent manner [3]. in vivo: Anti-neoplastic effects of curcumol were also confirmed in tumor bearing mice. Curcumol (60 mg/kg daily) significantly reduced tumor size without causing notable toxicity [1].

References:

[1]. Tang QL, et al. Curcumol induces apoptosis in SPC-A-1 human lung adenocarcinoma cells and displays anti-neoplastic effects in tumor bearing mice. Asian Pac J Cancer Prev. 2015;16(6):2307-12.

[2]. Chen G, et al. Curcumol induces HSC-T6 cell death through suppression of Bcl-2: involvement of PI3K and NF-κB pathways. Eur J Pharm Sci. 2014 Dec 18;65:21-8.

[3]. Yu M, et al. Curcumol suppresses RANKL-induced osteoclast formation by attenuating the JNK signaling pathway. Biochem Biophys Res Commun. 2014 May 2;447(2):364-70.

CAIndexNames:

6H-3a,6-Epoxyazulen-6-ol, octahydro-3-methyl-8-methylene-5-(1-methylethyl)-,(3S,3aS,5S,6R,8aS)-

SMILES:

O[C@@]1(C2)[C@H](C(C)C)C[C@]3(O1)[C@@H](C)CC[C@@]3([H])C2=C

Caution: Product has not been fully validated for medical applications. For research use only.

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