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Data Sheet

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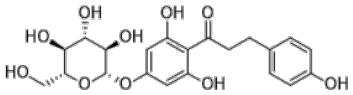
Product Name	:	Trilobatin
Cat. No.	:	PC-27436
CAS No.	:	4192-90-9
Molecular Formula	:	$C_{21}H_{24}O_{10}$
Molecular Weight	:	436.41
Target	:	Sirtuin
Solubility	:	10 mM in DMSO



Biological Activity

Trilobatin is a natural dihydrochalcone extracted from Lithocarpus polystachyus, ameliorates pulmonary fibrosis by directly and specifically targeting MEK1-dependent ERK signaling, also is an HIV-1 entry inhibitor targeting the HIV-1 Gp41 envelope, also is a SIRT7 activator.
Trilobatin effectively mitigates bleomycin (BLM)-induced pulmonary fibrosis in vivo and suppresses transforming growth factor-beta 1 (TGF-β1)-driven epithelial-mesenchymal transition (EMT) in vitro.
Trilobatin significantly attenuated pro-inflammatory cytokine secretion, limited inflammatory cell infiltration, preserved alveolar architecture, and decreased collagen deposition, ultimately leading to improved survival rates in fibrotic mice.
Trilobatin directly uncoupled the TGF-β-induced ERK signaling cascade by selectively inhibiting the phosphorylation of MEK1 and ERK1/2, without affecting the upstream activation of Raf1.
Trilobatin significantly increased the protein expressions of SIRT6, SIRT7, and VEGFA, but not affected SIRT1-SIRT5 protein expressions in mouse brain microvascular endothelium bEnd.3 cells.
Trilobatin directly binds to SIRT7, but also increases SIRT7 expression.
Trilobatin promotes cerebral microvascular endothelial cells proliferation, and facilitates angiogenesis after CIRI via mediating SIRT7/VEGFA signaling pathway in rats.
Trilobatin also inhibits PIKfyve activity in a dose-dependent manner with IC50 of 0.29 uM.

References

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