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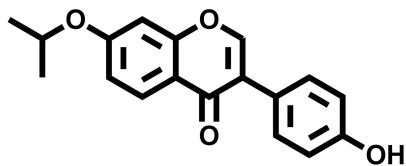
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Osteogenic Modulator – Daidzein-2c

Chemical Name: 3-(4-hydroxyphenyl)-7-isopropoxy-4H-chromen-4-one



Molecular Weight:	296.32
Formula:	C ₁₈ H ₁₆ O ₄
Purity:	≥98%
CAS#:	97846-18-9
Solubility:	DMSO up to 100 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 months -20 °C 1 year

Biological Activity:

Daidzein-2c is a potent synthetic daidzein analog, has osteogenic induction potentials on human Mesenchymal Stem Cells (MSC). Human bone marrow derived mesenchymal stem cells from three different donors were treated with Daidzein-2c and shown to exhibit enhanced osteogenesis when compared to daidzein or estrogen treatment. The enhanced osteogenic induction by Daidzein-2c resulted in increased osterix (Sp7), alkaline phosphatase (ALP), osteopontin (OPN), and insulin-like growth factor 1 (IGF-1), which are osteogenic factors that regulate the maturation of osteogenic progenitor cells into more differentiated osteoblast cells. It serves as a useful chemical tool to further validate and develop novel treatments of osteoporosis via promoting bone formation.

How to Use:

In vitro: Daidzein-2c was used at 1 μM final concentration in various in vitro assays.

In vivo:

Reference:

1. Amy L, et al. Design, Synthesis, and Osteogenic Activity of Daidzein Analogs on Human Mesenchymal Stem Cells. (2014) ACS Med. Chem. Lett., In press.

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