

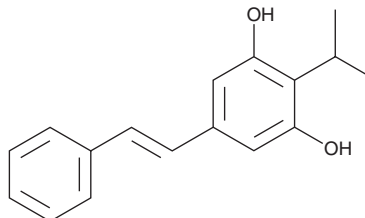
PRODUCT INFORMATION



Tapinarof

Item No. 36527

CAS Registry No.: 79338-84-4
Formal Name: 2-(1-methylethyl)-5-[(1E)-2-phenylethenyl]-1,3-benzenediol
Synonyms: Benvitimod, WBI-1001
MF: C₁₇H₁₈O₂
FW: 254.3
Purity: ≥98%
UV/Vis.: λ_{max}: 211, 240, 318 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

Tapinarof is supplied as a solid. A stock solution may be made by dissolving the tapinarof in the solvent of choice, which should be purged with an inert gas. Tapinarof is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of tapinarof in these solvents is approximately 10 mg/ml.

Description

Tapinarof is a stilbene that has been found in *P. luminescens* and has diverse biological activities.^{1,2} It is active against the fungi *C. tropicales*, *C. neoformans*, and *A. fumigatus* (MICs = 25, 12, and 12 µg/ml, respectively) and the plant pathogenic fungi *A. flavus* and *B. cinerea* (MICs = 25 and 12 µg/ml, respectively).¹ It induces nuclear translocation of the aryl hydrocarbon receptor (AhR; EC₅₀ = 0.16 nM) and expression of the AhR target gene CYP1A1 in HaCaT keratinocytes when used at a concentration of 1 µM.² Tapinarof (10 µM) reduces activated immune cell-induced mRNA expression of the gene encoding IL-17a in isolated human keratinocytes.^{2,3} Formulations containing tapinarof have been used in the topical treatment of adult plaque psoriasis.

References

1. Li, J., Chen, G., Wu, H., et al. Identification of two pigments and a hydroxystilbene antibiotic from *Photorhabdus luminescens*. *Appl. Environ. Microbiol.* **61(12)**, 4329-4333 (1995).
2. Smith, S.H., Jayawickreme, C., Rickard, D.J., et al. Tapinarof is a natural AhR agonist that resolves skin inflammation in mice and humans. *J. Invest. Dermatol.* **137(10)**, 2110-2119 (2017).
3. Smith, S.H., Peredo, C.E., Takedo, Y., et al. Development of a topical treatment for psoriasis targeting RORγ: From bench to skin. *PLoS One* **11(2)**, e0147979 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM