

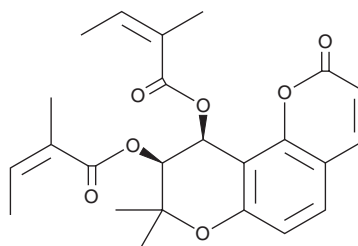
PRODUCT INFORMATION



(+)-Praeruptorin B

Item No. 37536

CAS Registry No.: 73069-28-0
Formal Name: (2Z,2'Z)-2-methyl-2-butenic acid, (9S,10S)-9,10-dihydro-8,8-dimethyl-2-oxo-2H,8H-benzo[1,2-b:3,4-b']dipyran-9,10-diyl ester
Synonym: (+)-Anomalin
MF: C₂₄H₂₆O₇
FW: 426.5
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Peucedanum praeruptorum* Dunn



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

Laboratory Procedures

(+)-Praeruptorin B is supplied as a solid. A stock solution may be made by dissolving the (+)-praeruptorin B in the solvent of choice, which should be purged with an inert gas. (+)-Praeruptorin B is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (+)-praeruptorin B in ethanol is approximately 5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Description

(+)-Praeruptorin B is a pyranocoumarin that has been found in *P. praeruptorum* and has diverse biological activities.¹⁻⁴ It inhibits RANKL-induced osteoclastogenesis of primary mouse bone marrow-derived macrophages (BMDMs) when used at a concentration of 10 μM and LPS-induced nitric oxide (NO) production in RAW 264.7 macrophages at 100 μM.^{1,2} (+)-Praeruptorin B inhibits platelet aggregation induced by platelet-activating factor (PAF) in isolated rabbit platelet-rich plasma (IC₅₀ = 50 μM) and contractions of isolated guinea pig ileum induced by histamine (Item No. 22328) or leukotriene D₄ (pD₂s = 4.84 and 4.34, respectively).³ It decreases ovariectomy-induced bone loss in a mouse model of osteoporosis when administered at a dose of 10 mg/kg. (+)-Praeruptorin B (10 μmol/animal) reduces the number of tumors initiated by 7,12-dimethylbenz[a]anthracene (DMBA; Item No. 30383) and promoted by phorbol 12-myristate 13-acetate (TPA; Item No. 10008014) in a mouse two-stage model of skin carcinogenesis.⁴

References

1. Lee, J., Lee, Y.J., Kim, J., *et al.* Pyranocoumarins from root extracts of *Peucedanum praeruptorum* Dunn with multidrug resistance reversal and anti-inflammatory activities. *Molecules* **20**(12), 20967-20978 (2015).
2. Xu, K., Chen, Z., Hou, J., *et al.* Praeruptorin B inhibits osteoclastogenesis by targeting GTP1 and impacting on the S-glutathionylation of IKKβ. *Biomed. Pharmacother.* **154**, 113529 (2022).
3. Aida, Y., Kasama, T., Takeuchi, N., *et al.* The antagonistic effects of khellactones on platelet-activating factor, histamine, and leukotriene D₄. *Chem. Pharm. Bull. (Tokyo)* **43**(5), 859-867 (1995).
4. Nishino, H., Okuyama, T., Takata, M., *et al.* Studies on the anti-tumor-promoting activity of naturally occurring substances. IV. Pd-II [(+)-anomalin, (+)-praeruptorin B], a seselin-type coumarin, inhibits the promotion of skin tumor formation by 12-O-tetradecanoylphorbol-13-acetate in 7,12-dimethylbenz[a]anthracene-initiated mice. *Carcinogenesis* **11**(9), 1557-1561 (1990).

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