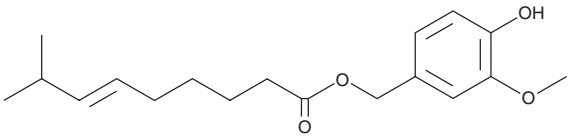
PRODUCT INFORMATION

Capsiate

Item No. 9002596

CAS Registry No.: 205687-01-0
Formal Name: 8-methyl-6E-nonenoic acid, (4-hydroxy-3-methoxyphenyl) methyl ester
MF: $C_{18}H_{26}O_4$
FW: 306.4
Purity: ≥85% (mixture of isomers)
Supplied as: A liquid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Capsiate is supplied as a liquid. A stock solution may be made by dissolving the capsiate in the solvent of choice, which should be purged with an inert gas. Capsiate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of capsiate in these solvents is approximately 30 mg/ml.

Description

Capsiate is a non-pungent analog of capsaicin (Item Nos. 92350 | 10010743) that has been found in *C. annuum* and has diverse biological activities.[1-4] It inhibits Src in, as well as VEGF-induced proliferation of and tube formation by, human umbilical vein endothelial cells (HUVECs) when used at concentrations ranging from 5 to 25 µM.[1] Capsiate activates transient receptor potential vanilloid 1 (TRPV1) in HEK293 cells expressing the human channel (EC_{50} = 290 nM) and induces licking and biting behaviors, markers of nociception, in mice.[2] Topical application of capsiate reduces antigen-induced increases in ear thickness in a mouse model of passive cutaneous anaphylaxis and decreases epidermal thickness and eosinophil and mast cell infiltration in a mouse model of atopic dermatitis.[3] Capsiate (10 mg/kg) decreases body weight gain and perirenal fat weight, as well as increases oxygen consumption, fat oxidation, and carbohydrate oxidation, in a mouse model of *ad libitum* feeding-induced weight gain.[4]

References

1. Pyun, B.-J., Choi, S., Lee, Y., *et al.* Capsiate, a nonpungent capsaicin-like compound, inhibits angiogenesis and vascular permeability via a direct inhibition of Src kinase activity. *Cancer Res.* **68(1)**, 227-235 (2008).
2. Iida, Y., Kobata, T.M., Morita, A., *et al.* TRPV1 activation and induction of nociceptive response by a non-pungent capsaicin-like compound, capsiate. *Neuropharmacology* **44(7)**, 958-967 (2003).
3. Lee, J.J., Lee, Y.S., Lee, E.-J., *et al.* Capsiate inhibits DNFB-induced atopic dermatitis in NC/Nga mice through mast cell and CD4+ T-cell inactivation. *J. Invest. Dermatol.* **135(8)**, 1977-1985 (2015).
4. Haramizu, S., Kawabata, F., Ohnuki, K., *et al.* Capsiate, a non-pungent capsaicin analog, reduces body fat without weight rebound like swimming exercise in mice. *Biomed. Res.* **32(4)**, 279-284 (2011).

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