

1601-1 (Sesquiterpene)

Name: Laurinterol {4-Bromo-2-(1,2-dimethyl-bicyclo[3.1.0]hex-2-yl)-5-methyl-phenol}

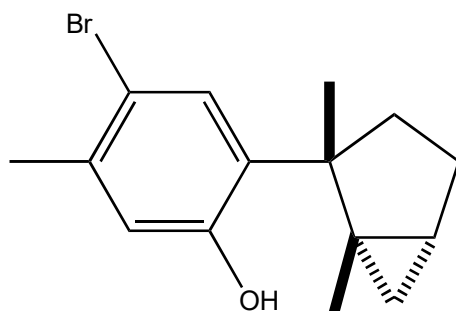
Origin: *Laurencia okamurae* (as *L. intermedia*)⁽⁴⁾ (Oshoro Bay, Hokkaido, Japan)⁽¹⁻³⁾;
Laurencia okamurae (as *L. okamurai*) (Hakatajima Island, Imabari, Ehime Pref., Japan)⁽⁵⁾;
Laurencia okamurae (as *L. okamurai*) (Okinoshima Island, Sukumo, Kochi Pref., Japan)⁽⁷⁾;
Laurencia okamurae (as *L. okamurai*) (Zagashima Island, Ago Bay, Mie Pref., Japan)⁽⁸⁾;
Laurencia nidifica (Goza, Mie Pref., Japan)⁽⁹⁾;
Laurencia nidifica (Toyohara, Nago and Teruma, Yonashiro, Okinawa Pref., Japan)⁽¹⁰⁾;
Laurencia nidifica (Tsukenjima Island, Teruma, Okinawa Pref, Japan)⁽¹¹⁾;
Laurencia nidiifca (Kahara Reef on the island of Oahu, Hawaii, USA)^(12,13);
Laurencia pacifica (San Diego, California, USA)^(14,15);
Laurencia pacifica (Ensenada, Mexico)⁽¹⁵⁾;
Laurencia decidua (Baja California, Mexico)⁽¹⁶⁾;
Laurencia okamurai (Nanji Island, Zhejiang Province, China)⁽¹⁷⁾;
Laurencia okamurae (Cheju Island, Korea)⁽¹⁸⁾;
Laurencia obtusa (Gokceada Island, Aegean Sea, Turkey)⁽¹⁹⁾;
Laurencia microcladai (Vroulidia Bay, Chios Island, Greece)⁽²⁰⁾;
Laurencia tristicha (Shanwei, Guangdong Province, China)⁽²¹⁾;
Laurencia johnstonii (the coast of Baja California Sur, Mexico)⁽²²⁾;
Marginisporum aberrans (Omaezaki, Shizuoka Pref., Japan)^(23,24);
Aplysia kurodai (Toyama Bay, Toyama, Japan)⁽²⁵⁾

Formula: C₁₅H₁₉BrO

Mol. Wt.: 295.21

Opt. Rot.: [α]_D¹⁵ +13.3 (CHCl₃)⁽¹⁾; [α]_D²⁵ +17 (CH₂Cl₂)⁽²²⁾

Mp.: 54-55⁽¹⁾; White crystal⁽²²⁾



References and Notes

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- (2) Irie, T., Suzuki, M., Kurosawa, E., and Masamune. T. 1970. Tetrahedron, **26**, 3271-3277. Laurinterol, debromolaurinterol and isolaurinterol, constituents from *Laurencia intermedia* Yamada. (UV, IR, ¹H-NMR, MS)

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References and Notes

(Continue from 1601-1)

- (3) **X-ray crystallographic analysis;** (a) Cameron, A. F., Ferguson, G., and Robertson, J. M. 1967. J. Chem. Soc. Chem. Commun., **1967**, 271-272. The crystal structure and absolute stereochemistry of laurinterol. The absolute stereochemistry of aplysin; (b) Cameron, A. F., Ferguson, G., and Robertson, J. M. 1969. J. Chem. Soc. (B), **1969**, 692-697. *Laurencia* natural products, Part II. Crystal structure and absolute stereochemistry of laurinterol acetate, a bicyclo[3.1.0]hexane derivative.
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- (11) Ishii, T., Nagamine, T., Nguyen, B. C. Q., and Tawata, S. 2017. Rec. Nat. Prod., **11**, 63-68. Insecticidal and repellent activities of laurinterol from the Okinawan red alga *Laurencia nidifica*. (together with laurinterol, isolaurinterol, aplysin, α -bromocuparene)
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(Continue from 1601-2)

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- (23) **From the red alga *Marginisporum aberrans***⁽²⁰⁾; Ohta, K. and Takagi, M. 1977. Phytochemistry, **16**, 1062-1063. Halogenated sesquiterpenes from the marine red alga *Marginisporum aberrans*. (together with [laurinterol](#), isolaurinterol, aplysin, aplysinal, aplysinal)
- (24) Since *Laurencia* species grow in the same locality, these brominated metabolites may derive from *Laurencia* sp.
- (25) **From the sea hare *Aplysia kurodai***; Tsukamoto, S., Yamashita, Y., and Ohta, T. 2005. Marine Drugs, **3**, 22-28. New cytotoxic and antibacterial compounds isolated from the sea hare, *Aplysia kurodai*. (¹H-NMR) (together with [laurinterol](#), laurinterol acetate, debromolaurinterol, debromolaurinterol acetate)

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References and Notes

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