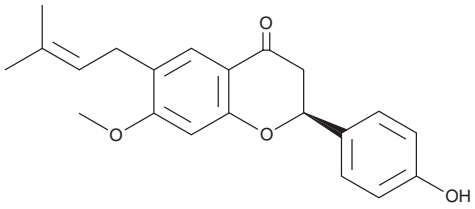
PRODUCT INFORMATION

Bavachinin

Item No. 19376

CAS Registry No.:	19879-30-2
Formal Name:	(2S)-2,3-dihydro-2-(4-hydroxyphenyl)-7-methoxy-6-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one
Synonym:	7-*O*-Methylbavachin
MF:	$C_{21}H_{22}O_4$
FW:	338.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 219, 233, 273, 320 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Bavachinin is supplied as a crystalline solid. A stock solution may be made by dissolving the bavachinin in the solvent of choice, which should be purged with an inert gas. Bavachinin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of bavachinin in these solvents is approximately 20, 30, and 50 mg/ml, respectively.

Bavachinin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, bavachinin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Bavachinin has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Bavachinin is a natural flavanone first isolated from seeds of *P. corylifolia*. It is a pan-PPAR agonist (EC_{50}s = 4.0, 8.1, and 0.74 µM for PPARα, β/δ, and γ, respectively).[1] Bavachinin has synergistic effects when combined with thiazolidinediones or fibrates. It lowers glucose and triacylglycerol levels in *db/db* mice without inducing weight gain or hepatotoxicity.[1] Bavachinin also has actions that block allergic inflammation, angiogenesis, and Aβ42 aggregation *in vitro*.[2-4]

References

1. Feng, L., Luo, H., Xu, Z., *et al.* Bavachinin, as a novel natural pan-PPAR agonist, exhibits unique synergistic effects with synthetic PPAR-γ and PPAR-α agonists on carbohydrate and lipid metabolism in *db/db* and diet-induced obese mice. *Diabetologia* **59(6)**, 1276-1286 (2016).
2. Chen, X., Yang, Y., and Zhang, Y. Isobavachalcone and bavachinin from *Psoraleae fructus* modulate Aβ42 aggregation process through different mechanisms *in vitro*. *FEBS Lett.* **587(18)**, 29350-29355 (2013).
3. Chen, X., Wen, T., Wei, J., *et al.* Treatment of allergic inflammation and hyperresponsiveness by a simple compound, bavachinin, isolated from Chinese herbs. *Cell. Mol. Immunol.* **10(6)**, 497-505 (2013).
4. Nepal, M., Choi, H.J., Choi, B.-Y., *et al.* Anti-angiogenic and anti-tumor activity of bavachinin by targeting hypoxia-inducible factor-1α. *Eur. J. Pharmacol.* **691(1-3)**, 28-37 (2012).

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