

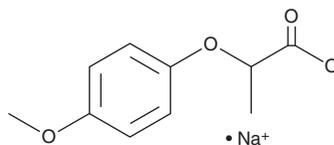
PRODUCT INFORMATION



Lactisole

Item No. 18657

CAS Registry No.: 150436-68-3
Formal Name: 2-(4-methoxyphenoxy)-propanoic acid, monosodium salt
Synonym: na-PMP
MF: C₁₀H₁₁O₄ • Na
FW: 218.2
Purity: ≥98%
UV/Vis.: λ_{max}: 226, 289 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

Lactisole is supplied as a crystalline solid. A stock solution may be made by dissolving the lactisole in the solvent of choice, which should be purged with an inert gas. Lactisole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of lactisole in these solvents is approximately 1, 10, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of lactisole can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of lactisole in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Lactisole is an antagonist of sweet taste receptors, reducing both sweetness intensity and persistence.^{1,2} It blocks the activation of the sweet taste receptor T1R3 by natural and synthetic sweeteners and increases the inhibition of T1R2 by umami compounds.^{3,4} Lactisole can be used to explore the roles of these receptors in diverse pathways, including glucose-induced insulin secretion in pancreatic β-cells and the secretion of glucagon-like peptides by enteroendocrine L-cells.^{3,5,6}

References

1. Johnson, C., Birch, G.G., and MacDougall, D.B. *Chem. Senses* **19(4)**, 348-358 (1994).
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3. Hamano, K., Nakagawa, Y., Ohtsu, Y., et al. *J. Endocrinol.* **226(1)**, 57-66 (2015).
4. Shim, J., Son, H.J., Kim, Y., et al. *PLoS One* **10(4)**, (2015).
5. Ohtsu, Y., Nakagawa, Y., Nagasawa, M., et al. *Mol. Cell. Endocrinol.* **394(1-2)**, 70-79 (2014).
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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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