

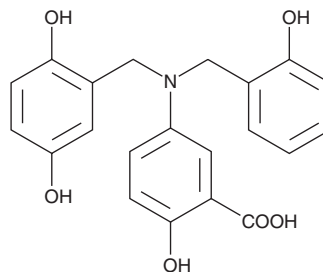
PRODUCT INFORMATION



Lavendustin A

Item No. 10010268

CAS Registry No.: 125697-92-9
Formal Name: 5-[[[(2,5-dihydroxyphenyl)methyl] [(2-hydroxyphenyl)methyl]amino]-2-hydroxy-benzoic acid
Synonyms: NSC 678027, RG-14355
MF: C₂₁H₁₉NO₆
FW: 381.4
Purity: ≥95%
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

Lavendustin A is supplied as a crystalline solid. A stock solution may be made by dissolving the lavendustin A in the solvent of choice, which should be purged with an inert gas. Lavendustin A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of lavendustin A in these solvents is approximately 10, 15, and 20 mg/ml, respectively.

Lavendustin A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, lavendustin A should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Lavendustin A has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Lavendustin A is a selective inhibitor of epidermal growth factor (EGF) receptor-associated tyrosine kinase (IC₅₀ = 11 nM) that was first isolated from a *Streptomyces* culture filtrate.^{1,2} It does not inhibit protein kinase A (PKA), PKC, or PI3K (IC₅₀s > 100 μM).² It has been used to differentiate rat mesenchymal stem cells, to inhibit NMDA-stimulated cGMP production, and to inhibit VEGF-induced angiogenesis.³⁻⁵

References

1. Onoda, T., Iinuma, H., Sasaki, Y., *et al.* Isolation of a novel tyrosine kinase inhibitor, lavendustin A, from *Streptomyces griseolavendus*. *J. Nat. Prod.* **52(6)**, 1252-1257 (1989).
2. Hsu, C.-Y.J., Persons, P.E., Spada, A.P., *et al.* Kinetic analysis of the inhibition of the epidermal growth factor receptor tyrosine kinase by lavendustin-A and its analogue. *J. Biol. Chem.* **266(31)**, 21105-21112 (1991).
3. Hwang, K.-C., Kim, J.Y., Chang, W., *et al.* Chemicals that modulate stem cell differentiation. *Proc. Natl. Acad. Sci. USA* **105(21)**, 7467-7471 (2008).
4. O'Dell, T.J., Kandel, E.R., and Grant, S.G.N. Long-term potentiation in the hippocampus is blocked by tyrosine kinase inhibitors. *Nature* **353**, 558-560 (1991).
5. Fan, T.-P.D., Jaggar, R., and Bicknell, R. Controlling the vasculature: Angiogenesis, anti-angiogenesis and vascular targeting of gene therapy. *Trends Pharmacol. Sci.* **16(2)**, 57-66 (1995).

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