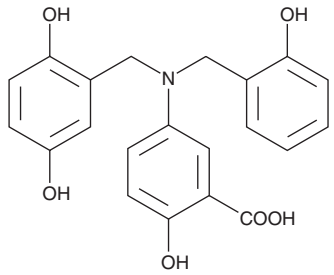
PRODUCT INFORMATION

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: $C_{21}H_{19}NO_6$
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 (IC_{50} = 11 nM) that was first isolated from a *Streptomyces* culture filtrate.[1,2] It does not inhibit protein kinase A (PKA), PKC, or PI3K (IC_{50}s > 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

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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).

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