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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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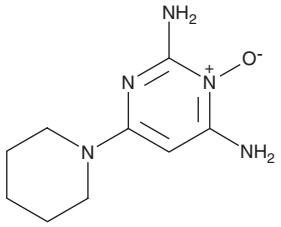
PRODUCT INFORMATION

Minoxidil

Item No. 15302

CAS Registry No.: 38304-91-5
Formal Name: 6-(1-piperidinyl)-2,4-pyrimidinediamine 3-oxide
Synonyms: Loniten, U-10858
MF: $C_9H_{15}N_5O$
FW: 209.3
Purity: ≥98%
UV/Vis.: λ_{max}: 231, 262, 284 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Minoxidil is supplied as a crystalline solid. A stock solution may be made by dissolving the minoxidil in the solvent of choice. Minoxidil is soluble in ethanol at a concentration of approximately 1 mg/ml.

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 minoxidil can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of minoxidil in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Minoxidil is a pyrimidine derivative that was originally developed as an anti-hypertensive agent and unexpectedly found to stimulate hair growth. Minoxidil directly affects arteriolar smooth muscle to decrease vascular resistance in part by opening ATP-sensitive potassium channels.[1,2] It can activate cyclooxygenase 1 (AC_{50} = 80 µM), which is expressed in the dermal papilla of hair follicles, increasing prostaglandin E_2 production in BALB/c 3T3 fibroblasts and human dermal papilla fibroblasts.[3]

References

1. Limas, C.J. and Cohn, J.N. Stimulation of vascular smooth muscle sodium, potassium--adenosinetriphosphatase by vasodilators. *Circ. Res.* **35(4)**, 601-607 (1974).
2. Imenshahidi, M., Hadizadeh, F., Firoozeh-Moghadam, A., *et al*. Synthesis and vasorelaxant effect of 9-aryl-1,8-acridinediones as potassium channel openers in isolated rat aorta. *Iran. J. Pharm. Res.* **11(1)**, 229-233 (2012).
3. Michelet, J.-F., Commo, S., Billoni, N., *et al*. Activation of cytoprotective prostaglandin synthase-1 by minoxidil as a possible explanation for its hair growth-stimulating effect. *J. Invest. Dermatol.* **108**, 205-209 (1997).

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