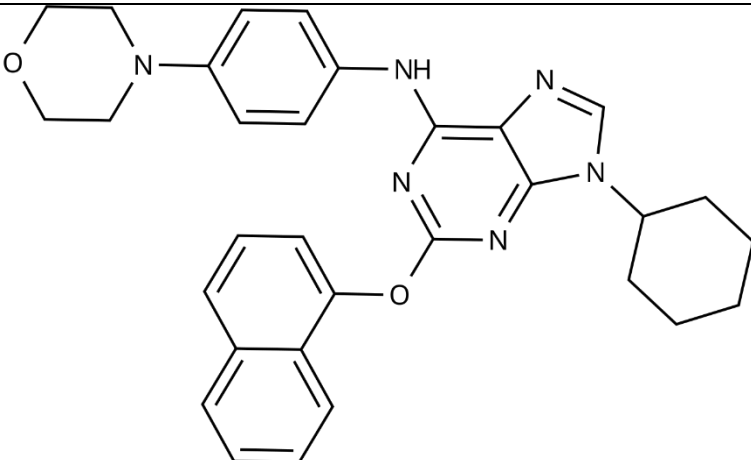


TrailBio® Purmorphamine User Instructions

Product Configurations

Catalog Number	Size	Quantity
TB68595	5 mg	1 vial

Product Description

Category	Specification
Product	Purmorphamine
Synonyms	-
CAS Number	483367-10-8
MDL Number	MFCD09037557
Formula	C ₃₁ H ₃₂ N ₆ O ₂
Molecular Weight	520.62 g/mol
Storage (Solid)	-20 °C for up to 3 years or 4 °C for up to 2 years
Storage (Solution)	-80 °C for up to 2 years or -20 °C for up to 1 year
Shipping	Ambient temperature
Chemical Structure	

Quality & Analytical Specifications

Test Parameter	Specification
Solid Appearance (Color)	White to off-white
Purity	≥98%

Solubility

Solvent	Solubility	Notes
DMSO	≤33 mg/ml (64 mM)	May require sonication

Solution Preparation Guide

Amount	1 mM	5 mM	10 mM
1 mg	1.921 ml	0.384 ml	0.192 ml
5 mg	9.604 ml	1.921 ml	0.960 ml
10 mg	19.208 ml	3.842 ml	1.921 ml

Biological Description

Purmorphamine is a synthetic purine-containing small molecule that acts as an agonist of Smoothed (SMO). It binds to and activates SMO, increasing Hedgehog signaling. Purmorphamine can promote osteogenic differentiation in responsive mesenchymal progenitor models. It can be used to study Hedgehog signaling, osteogenesis, and ventral neural and motor neuron differentiation.

Associated Pathways & Applications

Category	Description
Associated Pathways	Hedgehog/SMO; GLI-mediated osteogenic signaling
Applications	Osteoblast differentiation; mesenchymal stem cell osteogenesis; bone formation; ventral neural and motor neuron differentiation

Activity & Targets

Target	IC ₅₀
Smoothed	1.5 μM

Notes

- When using DMSO-based stock solutions, maintain a final DMSO concentration of <0.5% in cell culture applications to minimize potential cellular toxicity, unless a higher concentration has been validated for the specific cell type.
- Avoid repeated freeze-thaw cycles. Prepare single-use aliquots when possible.
- Compound may collect on the vial cap or neck during shipping; centrifuge briefly before opening to bring contents to the bottom.
- Certificate of Analysis (CoA) available upon request. Please contact support@trailbio.com.

Also available from Trailhead Biosystems®

Cells

- TrailBio® Vascular Leptomeningeal Cells (Cat No. EC040003010)
- TrailBio® Hematopoietic Progenitor Cells (Cat No. ME060001020)
- TrailBio® Endothelial Cells (Cat No. ME010101021)

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- TrailBio® Cytarabine (Ara-C) (Cat No. TB47622)
- TrailBio® SB-431542 (Cat No. TB46416)
- TrailBio® LDN-193189 dihydrochloride (Cat No. TB86388)
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