**Product Specification Sheet**

**Product Name:** Purmorphamine

**Catalog Number:** C7976

**Technical Information:**
- **Chemical Formula:** C\textsubscript{31}H\textsubscript{32}N\textsubscript{6}O\textsubscript{2}
- **CAS #:** 483367-10-8
- **Molecular Weight:** 520.62
- **Purity:** > 98%
- **Appearance:** White solid
- **Solubility:** Soluble in DMSO up to 22 mM
- **Chemical Name:** 9H-Purin-6-amine, 9-cyclohexyl-N-[4-(4-morpholinyl)phenyl]-2-(1-naphthalenyl oxy)-
- **Storage:** Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.
- **Shelf Life:** In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.

**Handling:**
- To make 10 mM stock solution, add 0.192 mL of DMSO for each mg of Purmorphamine.
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

**Biological Activity:** Purmorphamine, a purine-based agonist of the Hedgehog signaling pathway, selectively induces osteogenesis in multipotent mesenchymal progenitor cells. In addition, purmorphamine regulates downstream targets such as Gli1 and Patched, which led to the discovery of its direct effect on Smoothened. [1, 3] Purmorphamine acts in contrast to known Hedgehog antagonists, such as cyclopamine and forskolin. In a luciferase-based assay, the EC\textsubscript{50} of purmorphamine was found to be 0.5 \textmu M. [1]

In an independent study on C3H10T1/2 cells, the EC\textsubscript{50} of purmorphamine was found to be 1 \textmu M, inducing a 50-fold increase in alkaline phosphatase (ALP). [2, 3]

**Reference:**

**To reorder:** [http://www.cellagentech.com/Purmorphamine/](http://www.cellagentech.com/Purmorphamine/)

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*Chemicals are sold for research use only, not for clinical or diagnostic use.*