Cat No. 11-E93

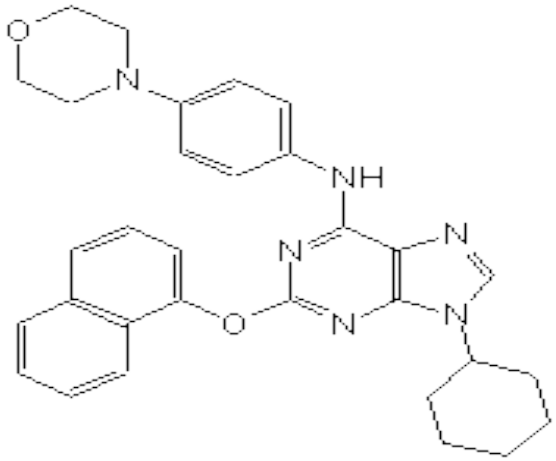
Purmorphamine

5 mg

For research purposes only

Purmorphamine is a 2,6,9-trisubstituted purine that has been shown to promote the differentiation of both human and mouse mesenchymal progenitor cells into osteoblasts. Purmorphamine has been found to directly bind to and activate the 7-transmembrane Smo receptor of the Hedgehog signaling pathway. It has also been used in studies to replace sonic hedgehog for the generation of motor neurons from human embryonic stem cells.

TECHNICAL INFORMATION



Other Names: 9-cyclohexyl-N-[4-(morpholinyl)phenyl]-2-(1-naphthalenyloxy)-9H-purin-6-amine

Chemical Formula: $C_{31}H_{32}N_6O_2$

CAS Number: 483367-10-8

Molecular Weight: 520.6

Purity: >98%

Appearance: a crystalline solid

Solubility: DMSO

STORAGE AND HANDLING

Storage: Store at 4°C and protected from light. Following reconstitution, store aliquots at -20°C.

Stability: Stock solutions stable at -20°C for up to 2 years.

Shipping Conditions: Shipped at room temperature.

PRODUCT USE

Soluble in DMSO. For a 10 mM concentrated stock solution of Purmorphamine, reconstitute the compound by adding 960.4 µl of DMSO to the entire contents of the vial. If precipitate is observed, vortex for 5 minutes. For most cells, the maximum tolerance to DMSO is less than 0.5%.

REFERENCES

1. Sinha et al. (2006) Purmorphamine activates the Hedgehog pathway by targeting Smoothened. Nat Chem Biol. 2(1):29-30.
2. Wu et al. (2004) Purmorphaine induces osteogenesis by activation of the hedgehog signaling pathway. Chem Biol. 11(9): 1229-38.
3. Oliveira et al. (2012) Hedgehog signaling and osteoblast gene expression are regulated by purmorphamine in human mesenchymal stem cells. J Cell Biochem. 113(1):204-8.