



Product Specification Sheet

Product Name: 53AH

Catalog Number: C5324

Technical information:

Chemical Formula: $C_{26}H_{28}N_2O_3$

CAS #: N/A

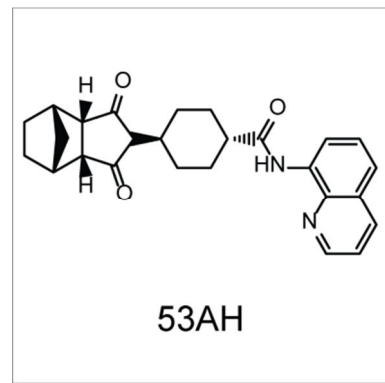
Molecular Weight: 416.51

Purity: >98%

Formulation: Off white solid

Solubility: Soluble in DMSO up to 50 mM

Chemical Name: (1R,4r)-4-((2s,3aR,4R,7S,7aS)-1,3-dioxooctahydro-1H-4,7-methanoinden-2-yl)-N-(quinolin-8-yl)cyclohexanecarboxamide



Storage: Store solid powder at 4 °C desiccated; Store DMSO solution at -20 °C.

- Handling:**
- To make 10 mM stock solution, add 0.240 mL of DMSO for each 1mg of 53AH.
 - For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

Biological Activity: 53AH is a selective Wnt pathway inhibitor. It is a cyclohexyl analog of IWR-1 with defined centers of chirality. In the Wnt assay, the 53AH has 5-fold greater potency in Wnt inhibition.

Compared to IWR-1, 53AH is more potent at promoting stem cell differentiation into cardiomyocytes. The increase in Wnt pathway inhibition potency correlates with a 1.4-fold increase in cardiogenesis. 53AH possesses superior physicochemical properties compared to IWR-1 including improved water solubility and significantly increased chemical stability at pH = 7.4 and low cytotoxicity. Accordingly, 53AH is significantly more robust for long-term cell-based experiments and potency in cardiogenesis because of its superior chemical properties.

-
- Reference:** 1. Willems E, et al, Small-molecule inhibitors of the Wnt pathway potently promote cardiomyocytes from human embryonic stem cell-derived mesoderm. *Circ Res.* 2011;109(4):360-4. PMID: [21737789](https://pubmed.ncbi.nlm.nih.gov/21737789/)

For Technical Support: technical@cellagentech.com

For research use only, not for clinical or diagnostic use.