

Product Name: ITD 1

Catalog No.: 5068

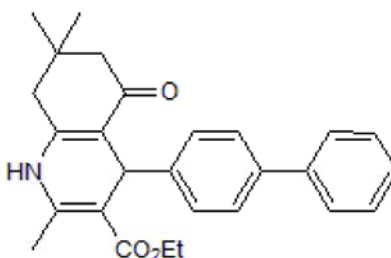
Batch No.: 1

CAS Number: 1099644-42-4

IUPAC Name: 4-[1,1'-Biphenyl]-4-yl-1,4,5,6,7,8-hexahydro-2,7,7-trimethyl-5-oxo-3-quinolinecarboxylic acid ethyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₇H₂₉NO₃
Batch Molecular Weight: 415.52
Physical Appearance: Beige solid
Solubility: DMSO to 20 mM
ethanol to 10 mM with gentle warming
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.55 (Ethyl acetate:Petroleum ether [2:3])
HPLC: Shows 98.1% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	78.04	7.03	3.37
Found	77.91	6.87	3.46

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Selective inhibitor of TGF- β signaling (IC_{50} = 0.85 μ M); displays little or no inhibition of activin, Wnt or BMP signaling pathways. Induces proteasomal degradation of the TGF- β type II receptor. Inhibits TGF- β -induced mesoderm formation from mouse embryonic stem cells (ESCs) during early differentiation; selectively promotes the differentiation of ESCs to cardiomyocytes in vitro between days 3-5. Does not induce differentiation of vascular smooth muscle cells or endothelial cells.

Physical and Chemical Properties:

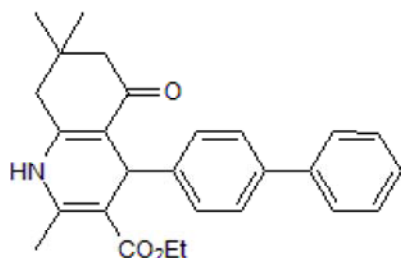
Batch Molecular Formula: $C_{27}H_{29}NO_3$

Batch Molecular Weight: 415.52

Physical Appearance: Beige solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 20 mM

ethanol to 10 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Kinney et al (2013) Emerging strategies for spatiotemporal control of stem cell fate and morphogenesis. *Trends Biotechnol.* **31** 78. PMID: 23219200.

Willems et al (2012) Small molecule-mediated TGF- β type II receptor degradation promotes cardiomyogenesis in embryonic stem cells. *Cell Stem Cell* **11** 242. PMID: 22862949.

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