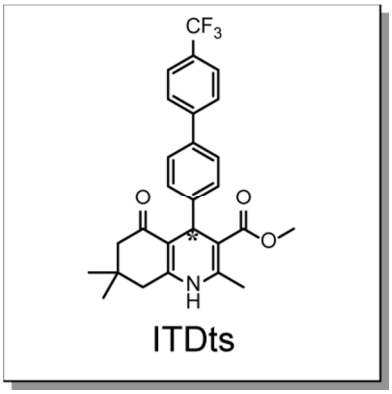
Product Specification Sheet

Product Name: ITDts

Catalog Number: C4838



Technical information:

Chemical Formula:	$C_{27}H_{26}F_3NO_3$
CAS #:	N/A
Molecular Weight:	469.50
Purity:	>98%
Appearance:	Yellow powder
Solubility:	Soluble in DMSO up to 50 mM
Chemical Name:	methyl 2,7,7-trimethyl-5-oxo-4-(4'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)-1,4,5,6,7,8-hexahydroquinoline-3-carboxylate
Storage:	Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

Handling:

- To make 10 mM stock solution, add 0.213 mL of DMSO for each 1mg of ITDts.
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

Biological Activity:

ITDts is a novel selective TGF-β pathway-selective inhibitor that inhibits TGF-β activity by selectively degrading the TGF-β2 receptor at the proteosome level. Racemic ITDts is 2-fold selective over the closely related Activin A signaling pathway.
ITDts stimulates embryonic stem cells to differentiate into cardiomyocytes (IC50 0.7 μM) by degrading the receptor and inhibiting intracellular signaling. ITDts has been formulated as a salt to increase stability and improve water solubility (~0.1 mg/mL) for ease of handling. As a salt, ITDts is chemically and metabolically stable and is non-cytotoxic. ITDts can be used to study a wide range of biological questions in cellular processing and TGF-β signaling..

Reference:

1. Willems E, et al. Small molecule-mediated TGF-β type II receptor degradation promotes cardiomyogenesis in embryonic stem cells. Cell Stem Cell. 2012;11(2):242-52. PMID: 22862949

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