



## Product Specification Sheet

**Product Name:** ITDts

**Catalog Number:** C4838

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**Technical information:**

Chemical Formula:  $C_{27}H_{26}F_3NO_3$

CAS #: N/A

Molecular Weight: 469.50

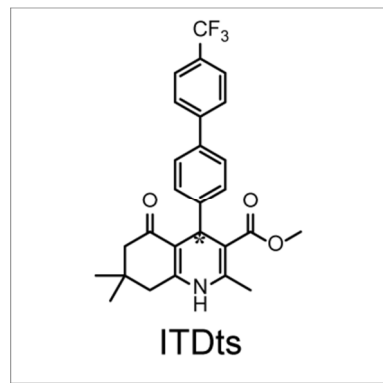
Purity: >98%

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.



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- 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.

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**Biological Activity:** ITDts is a novel selective TGF- $\beta$  pathway-selective inhibitor that inhibits TGF- $\beta$  activity by selectively degrading the TGF- $\beta$ 2 receptor at the proteasome level. Racemic ITDts is 2-fold selective over the closely related Activin A signaling pathway. ITDts stimulates embryonic stem cells to differentiate into cardiomyocytes (IC<sub>50</sub> 0.7  $\mu$ M) 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- $\beta$  signaling..

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- Reference:**
1. Willems E, et al. Small molecule-mediated TGF- $\beta$  type II receptor degradation promotes cardiomyogenesis in embryonic stem cells. Cell Stem Cell. 2012;11(2):242-52. PMID: [22862949](#)

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For Technical Support: [technical@cellagentech.com](mailto:technical@cellagentech.com)

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