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## ITD-1

产品编号: D50737

CAS: 1099644-42-4

分子式: C<sub>27</sub>H<sub>29</sub>NO<sub>3</sub>

纯度: ≥98%

InChi: InChi=1S/C<sub>27</sub>H<sub>29</sub>NO<sub>3</sub>/c1-5-31-26(30)23-17(2)28-21-15-27(3,4)16-22(29)25(21)24(23)20-13-11-19(12-14-20)18-9-7-6-8-10-18/h6-14,24,28H,5,15-16H2,1-4H3

InChi Key: ULFUJLFTRWWLPO-UHFFFAOYSA-N

Smiles: CC1NC2CC(C)(C)CC(=O)C=2C(C=1C(=O)OCC)C1C=CC(=CC=1)C1C=CC=CC=1

外观: 固体粉末

作用通路: TGF-β Receptor

溶解性: DMSO up to 50 mM

保存条件: Store in dry, dark place for one year.

产品介绍: ITD-1 is a novel and highly selective TGFβ pathway inhibitor identified by a high throughput, embryonic stem cell (ESC) cardiac differentiation screening. ITD-1 promoted cardiomyocyte differentiation specifically via degradation of the TGFβ type II receptor (TGFB2), effectively clearing the receptor from the cell surface and selectively inhibiting intracellular signaling (IC<sub>50</sub> 0.4-0.8 μM), revealing a role for TGFβ signaling mechanism as a repressor of cardiomyocyte fate. ITD-1 selectively enhanced the differentiation of uncommitted mesoderm to cardiomyocytes, but not to vascular smooth muscle and endothelial cells. In contrast to other commonly used TGFβ receptor (ALK) inhibitors, ITD-1 importantly only inhibits TGFβ signaling, but does not block the closely related Activin A signaling pathway, and represents a unique reagent for exploring TGFβ function in various biological contexts such as embryonic development and models of disease.