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OAC1

产品编号: D50761
CAS: 300586-90-7
分子式: C14H11N3O
纯度: ≥98%
InChi: InChI=1S/C14H11N3O/c18-14(10-4-2-1-3-5-10)17-13-8-11-6-7-15-12(11)9-16-13/h1-9,15H,(H,16,17,18)
InChi Key: HWJRIFZDXJKJJN-UHFFFAOYSA-N
Smiles: O=C(NC1C=C2C=CNC2=CN=1)C1C=CC=CC=1
外观: 固体粉末
作用通路: Oct3/4
溶解性: DMSO up to 100 mM
保存条件: Store in dry, dark place for one year.
产品介绍: OAC1 is a potent and selective small molecule to activate both Oct4 and Nanog promoter-driven luciferase reporter genes, identified from a cell-based high-throughput screening. When added to the reprogramming media along with the four reprogramming factors (Oct4, Sox2, Klf4, and c-Myc), OAC1 can significantly enhance iPSC reprogramming efficiency (20-fold higher than that induced by the 4F alone) and accelerate the reprogramming process. The iPSC colonies derived using OAC1 along with the four factors exhibited typical ESC morphology, gene-expression pattern, and developmental potential. OAC1 seems to enhance reprogramming efficiency in a unique manner, independent of either inhibition of the p53-p21 pathway or activation of the Wnt-β-catenin signaling. OAC1 increases transcription of the Oct4-Nanog-Sox2 triad and Tet1, a gene known to be involved in DNA demethylation. OAC1 may be used for large-scale iPSC generation for various applications.