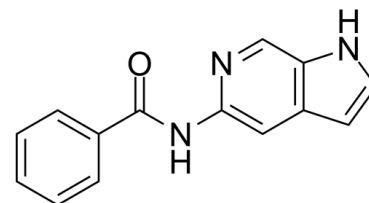


Data Sheet

Product Name:	OAC1
Cat. No.:	CS-4181
CAS No.:	300586-90-7
Molecular Formula:	C ₁₄ H ₁₁ N ₃ O
Molecular Weight:	237.26
Target:	Oct3/4
Pathway:	Stem Cell/Wnt
Solubility:	DMSO : ≥ 40 mg/mL (168.59 mM)



BIOLOGICAL ACTIVITY:

OAC1 is a Octamer-binding transcription factor 4 (Oct4)-activating compound; enhances the iPSC reprogramming efficiency and accelerated the reprogramming process. IC₅₀ value: Target: Oct4 activator in vitro: OAC1 enhances the formation of Oct4-GFP+ colonies and accelerates the dynamics of reprogramming. OAC1 enhanced reprogramming efficiency through a mechanism that is independent of endogenous Oct4 promoter demethylation. OAC1 enhanced reprogramming efficiency through a mechanism that is distinct from suppressing p53-p21 expression. Luciferase assay revealed that OAC1 had no effect on Topflash activity, although BIO activated the Topflash reporter potently. OAC1 functions through a mechanism that is independent of the Wnt signaling.

PROTOCOL (Extracted from published papers and Only for reference)

Cell assay [1] The Oct4-luc cells were seeded at 1.75 × 10⁴ cells per well density into 96-well plates. Compounds were added to cells 1 d after cell seeding at the concentration of 10 μM for 24 h in the High-Throughput Screening core facility at City of Hope. Compounds that induced luciferase activity threefold or more were selected for further validation in both Oct4-luc and Nanog-luc cells.

References:

[1]. Li W, et al. Identification of Oct4-activating compounds that enhance reprogramming efficiency. Proc Natl Acad Sci U S A. 2012 Dec 18;109(51):20853-8.

CAIndexNames:

Benzamide, N-1H-pyrrolo[2,3-c]pyridin-5-yl-

SMILES:

O=C(NC1=CC2=C(NC=C2)C=N1)C3=CC=CC=C3

Caution: Product has not been fully validated for medical applications. For research use only.

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