

PRODUCT INFORMATION



OAC3

Item No. 14104

CAS Registry No.: 182564-41-6
Formal Name: 4-fluoro-N-1H-indol-5-yl-benzamide

MF: C₁₅H₁₁FN₂O

FW: 254.3

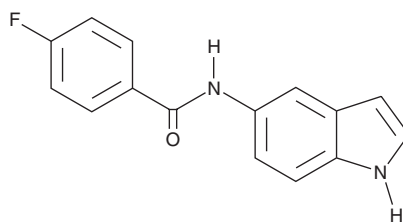
Purity: ≥98%

UV/Vis.: λ_{max}: 224, 264 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

OAC3 is supplied as a crystalline solid. A stock solution may be made by dissolving the OAC3 in the solvent of choice. OAC3 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of OAC3 in these solvents is approximately 12.5, 16, and 20 mg/ml, respectively.

OAC3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, OAC3 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. OAC3 has a solubility of approximately 0.50 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Octamer-binding transcription factor 4 (Oct4) is a transcription factor which, with Sox2, KLF4, and c-Myc, is involved in the reprogramming of somatic cells to produce pluripotent stem cells.^{1,2} OAC3 is an Oct4-activating compound which activates expression through the Oct4 gene promoter.³ In cells expressing Oct4 with Sox2, KLF4, and c-Myc, OAC3 (1 μM) enhances reprogramming efficiency by increasing the rate of production of induced pluripotent stem cells from embryonic fibroblasts.³

References

1. Niwa, H., Miyazaki, J., and Smith, A.G. Quantitative expression of Oct-3/4 defines differentiation, dedifferentiation or self-renewal of ES cells. *Nat. Genet.* **24**(4), 372-376 (2000).
2. Takahashi, K., Tanabe, K., Ohnuki, M., *et al.* Induction of pluripotent stem cells from adult human fibroblasts by defined factors. *Cell* **131**, 861-872 (2007).
3. Li, W., Tian, E., Chen, Z.-X., *et al.* Identification of Oct4-activating compounds that enhance reprogramming efficiency. *Proc. Natl. Acad. Sci. USA* **109**(51), 20853-20858 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM