

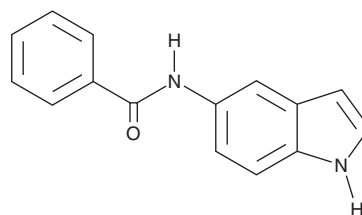
# PRODUCT INFORMATION



## OAC2

Item No. 14103

CAS Registry No.:	6019-39-2
Formal Name:	N-1H-indol-5-yl-benzamide
MF:	C <sub>15</sub> H <sub>12</sub> N <sub>2</sub> O
FW:	236.3
Purity:	≥98%
UV/Vis.:	λ <sub>max</sub> : 202, 224, 265 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

OAC2 is supplied as a crystalline solid. A stock solution may be made by dissolving the OAC2 in the solvent of choice. OAC2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of OAC2 in these solvents is approximately 2.5, 10, and 20 mg/ml, respectively.

OAC2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, OAC2 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. OAC2 has a solubility of approximately 0.5 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.<sup>1,2</sup> OAC2 is an Oct4-activating compound which activates expression through the Oct4 gene promoter.<sup>3</sup> In cells expressing Oct4 with Sox2, KLF4, and c-Myc, OAC2 (1 μM) enhances reprogramming efficiency by increasing the rate of production of induced pluripotent stem cells (iPSCs) from embryonic fibroblasts.<sup>3</sup> The iPSCs developed using OAC2 retain the capacity for pluripotent differentiation, whether evaluated *in vitro* or *in vivo*.<sup>3</sup>

### 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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