

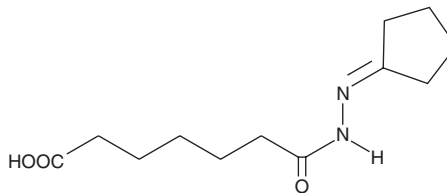
PRODUCT INFORMATION



IDE2

Item No. 13817

CAS Registry No.: 1136466-93-7
Formal Name: 1-(2-cyclopentylidenehydrazide)-heptanedioic acid
MF: C₁₂H₂₀N₂O₃
FW: 240.3
Purity: ≥98%
UV/Vis.: λ_{max}: 233 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

IDE2 is supplied as a crystalline solid. A stock solution may be made by dissolving the IDE2 in the solvent of choice. IDE2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of IDE2 in these solvents is approximately 0.1, 25, and 33 mg/ml, respectively.

IDE2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, IDE2 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. IDE2 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

IDE2 is a small molecule capable of inducing definitive endoderm from embryonic stem cells. It has been shown to induce the differentiation of Sox17+/FoxA2+-expressing pancreatic progenitors from human and mouse embryonic stem cells (EC₅₀ = 223 nM *in vitro*) by activating the TGF-β signaling pathway.¹ IDE2-derived endodermal cells injected into E8.75 mouse embryos *ex vivo* have been shown to incorporate into the developing gut tube, contributing to its formation.¹ Furthermore, when treated with either indolactam V (Item No. 14647) or a standard regimen of the growth factor FGF-10, retinoic acid, and hedgehog inhibitors, IDE2-induced endodermal cells can form Pdx1-expressing pancreatic progenitors.¹

Reference

1. Borowiak, M., Maehr, R., Chen, S., *et al.* Small molecules efficiently direct endodermal differentiation of mouse and human embryonic stem cells. *Cell Stem Cell* **4**, 348-358 (2009).

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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