Small Molecules

IDE2

Activin/BMP/TGF-β pathway activator

Catalog # 72522 1 mg
72524 5 mg

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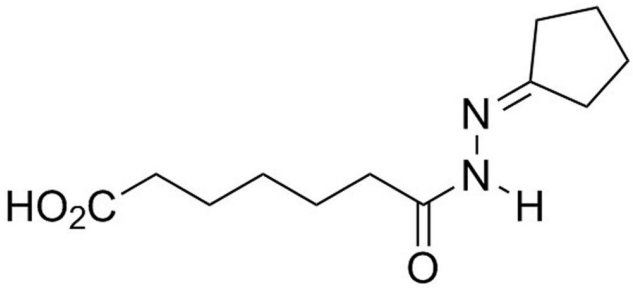
Product Description

Inducer of definitive endoderm 2 (IDE2) induces differentiation of mouse or human embryonic stem (ES) cells by activating SMAD2 phosphorylation and NODAL expression (Borowiak et al.). At EC_{50} = 223 nM, SOX17 expression was induced in mouse ES cells.

Molecular Name:	IDE2
Alternative Names:	Not applicable
CAS Number:	1136466-93-7
Chemical Formula:	$C_{12}H_{20}N_2O_3$
Molecular Weight:	240.3 g/mol
Purity:	≥ 98%
Chemical Name:	1-(2-cyclopentylidenehydrazide)-heptanedioic acid
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect from prolonged exposure to light. Stable as supplied for 12 months from date of receipt.
Solubility:	· Absolute ethanol ≤ 410 µM · DMSO ≤ 100 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 416 µL of DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

DIFFERENTIATION
· Induces definitive endoderm from mouse or human ES cells in the absence of Activin A, NODAL, or feeder cells (Borowiak et al.).

References

Borowiak M et al. (2009) Small molecules efficiently direct endodermal differentiation of mouse and human embryonic stem cells. Cell Stem Cell 4(4): 348–58.

Related Small Molecules

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