

Small Molecules

IDE2

Activin/BMP/TGF- β pathway activator

Catalog # 72522
72524

1 mg
5 mg



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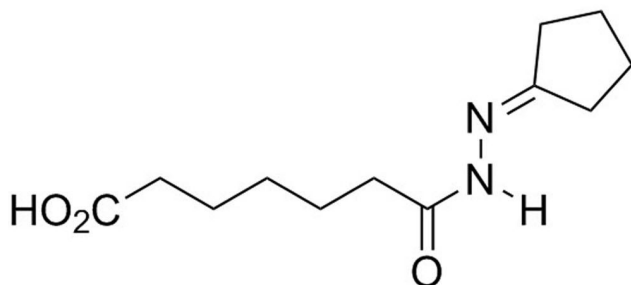
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Product Description

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: $\geq 98\%$
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. For product expiry date, please contact techsupport@stemcell.com.
Solubility: \cdot Absolute ethanol $\leq 410 \mu\text{M}$
 \cdot DMSO $\leq 100 \text{ mM}$
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

For a complete list of small molecules available from STEMCELL Technologies, please visit our website at www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

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