

## Small Molecules

IDE1

Activin/BMP/TGF- $\beta$  pathway activator

Catalog # 72512  
72514

1 mg  
5 mg



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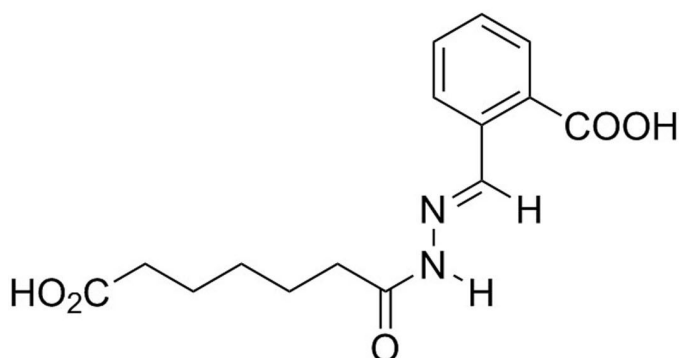
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## Product Description

Inducer of definitive endoderm 1 (IDE1) induces differentiation of mouse or human embryonic stem (ES) cells by activating SMAD2 phosphorylation and NODAL expression (Borowiak et al.). At  $EC_{50}$  = 125 nM, SOX17 expression was induced in mouse ES cells.

**Molecular Name:** IDE1  
**Alternative Names:** Not applicable  
**CAS Number:** 1160927-48-9  
**Chemical Formula:**  $C_{15}H_{18}N_2O_5$   
**Molecular Weight:** 306.3 g/mol  
**Purity:**  $\geq 95\%$   
**Chemical Name:** 1-[2-[(2-carboxyphenyl)methylene]hydrazide]-heptanedioic acid  
**Structure:**



## Properties

**Physical Appearance:** A crystalline solid  
**Storage:** Product stable at  $-20^{\circ}\text{C}$  as supplied. Protect from prolonged exposure to light. For product expiry date, please contact [techsupport@stemcell.com](mailto:techsupport@stemcell.com).  
**Solubility:** · Absolute ethanol  $\leq 320 \mu\text{M}$   
· DMSO  $\leq 80 \text{ mM}$   
For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 326  $\mu\text{L}$  of fresh 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  $-20^{\circ}\text{C}$ . 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 differentiation of mouse or human ES cells to definitive endoderm 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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