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## DATASHEET

PD 0325901

### Product overview

<b>Name</b>	PD 0325901
<b>Cat No</b>	HB2240
<b>Alternative names</b>	PD325901
<b>Biological action</b>	Inhibitor
<b>Purity</b>	>98%
<b>Description</b>	Potent MEK1 and MEK2 inhibitor. Enhances iPSCs generation. Used in organoid production.

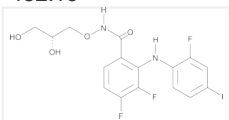
### Biological Data

<b>Biological description</b>	<p>PD 0325901 is a potent, non-ATP competitive MEK1 (MKK1) and MEK2 (MKK2) inhibitor (<math>K_i</math> values are 0.79 and 1.1 nM at MEK1 and MEK2 respectively).</p> <p>Cell permeable.</p> <p>PD 0325901 induces G<sub>1</sub>-phase cell cycle arrest and apoptosis and inhibits melanoma cell line growth <i>in vitro</i> and <i>in vivo</i>.</p> <p>It increases reprogramming efficiency of human primary fibroblasts into iPSCs when combined with <a href="#">SB 431542</a> and also prevents cell differentiation and sustains self-renewal of ESCs when combined with <a href="#">CHIR 99021</a> (as part of the 2i inhibitor combination).</p> <p>Also used in ear organoid production.</p>
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### Solubility & Handling

<b>Storage instructions</b>	-20 °C
<b>Solubility overview</b>	Soluble in DMSO (25mM)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

<b>Chemical name</b>	N-[(2 <i>R</i> )-2,3-Dihydroxypropoxy]-3,4-difluoro-2-[(2-fluoro-4-iodophenyl)amino]-benzamide
<b>Molecular Weight</b>	482.19
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>16</sub> H <sub>14</sub> F <sub>3</sub> IN <sub>2</sub> O <sub>4</sub>
<b>CAS Number</b>	391210-10-9
<b>PubChem identifier</b>	9826528
<b>SMILES</b>	C1=CC(=C(C=C1)F)NC2=C(C=CC(=C2F)F)C(=O)NOC[C@@H](CO)O
<b>InChi</b>	InChI=1S/C16H14F3IN2O4/c17-11-3-2-10(16(25)22-26-7-9(24)6-23)15(14(11)19)21-13-4-1-8(20)5-12(13)18/h1-5,9,21,23-24H,6-7H2,(H,22,25)/t9-m/s1
<b>InChiKey</b>	SUDAHWBOROXANE-SECBINFHSA-N

**MDL number**  
**Appearance**

MFCD08435926  
White Solid

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## References

### **A chemical platform for improved induction of human iPSCs.**

Lin et al (2009) Nat Methods 6(11)

**PubMedID** [19838168](#)

### **The ground state of embryonic stem cell self-renewal.**

Ying et al (2008) Nature 453(7194)

**PubMedID** [18497825](#)

### **The discovery of the benzhydroxamate MEK inhibitors CI-1040 and PD 0325901.**

Barrett et al (2008) Bioorg Med Chem Lett 18(24)

**PubMedID** [18952427](#)

### **Growth-inhibitory and antiangiogenic activity of the MEK inhibitor PD0325901 in malignant melanoma with or without BRAF mutations.**

Ciuffreda et al (2009) Neoplasia 11(8)

**PubMedID** [19649202](#)

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