

Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@m2stage-v2.hellobio.com



DATASHEET

PD 0325901

Product overview

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

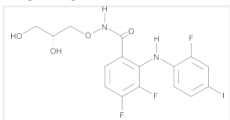
Biological Data

Biological description	PD 0325901 is a potent, non-ATP competitive MEK1 (MKK1) and MEK2 (MKK2) inhibitor (K_i values are 0.79 and 1.1 nM at MEK1 and MEK2 respectively). Cell permeable. PD 0325901 induces G₁-phase cell cycle arrest and apoptosis and inhibits melanoma cell line growth <i>in vitro</i> and <i>in vivo</i>. It increases reprogramming efficiency of human primary fibroblasts into iPSCs when combined with SB 431542 and also prevents cell differentiation and sustains self-renewal of ESCs when combined with CHIR 99021 (as part of the 2i inhibitor combination). Also used in ear organoid production.
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Solubility & Handling

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

Chemical Data

Chemical name	N-[(2 <i>R</i>)-2,3-Dihydroxypropoxy]-3,4-difluoro-2-[(2-fluoro-4-iodophenyl)amino]-benzamide
Molecular Weight	482.19
Chemical structure	
Molecular Formula	C ₁₆ H ₁₄ F ₃ IN ₂ O ₄
CAS Number	391210-10-9
PubChem identifier	9826528
SMILES	<chem>C1=CC(=C(C(=C1)F)NC2=C(C=CC(=C2F)F)C(=O)NOC[C@@H](CO)O</chem>
InChi	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
InChiKey	SUDAHWBOROXANE-SECBINFHSA-N

Chemical name	<i>N</i> -[(2 <i>R</i>)-2,3-Dihydroxypropoxy]-3,4-d ifluoro-2-[(2-fluoro-4-iodophenyl)amino]-benzamide
MDL number	MFCD08435926
Appearance	White Solid

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](#)
