Certificate of Analysis

Product Name: **PD 0325901** **Catalog No.: 4192** **Batch No.: 5**

CAS Number: 391210-10-9

IUPAC Name: *N*-[(2*R*)-2,3-Dihydroxypropoxy]-3,4-difluoro-2-[(2-fluoro-4-iodophenyl)amino]-benzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{14}F_3IN_2O_4$

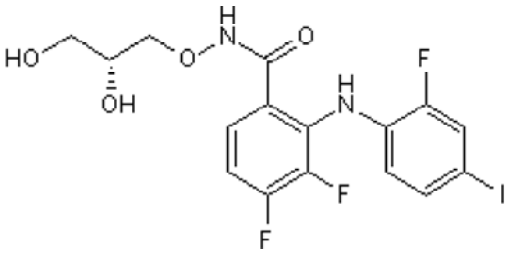
Batch Molecular Weight: 482.19

Physical Appearance: Off-white solid

Solubility: DMSO to 25 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100.0% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	39.85	2.93	5.81
Found	40.13	2.87	5.75

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Description:

PD 0325901 is a potent MEK1 and MEK2 inhibitor. PD 0325901 inhibits MEK activity in mouse colon 26 cells (IC_{50} = 0.33 nM). PD 0325901 inhibits the growth of melanoma cell lines in vitro and in vivo; induces G_1-phase cell cycle arrest and apoptosis in a mouse xenograft model. PD 0325901 also inhibits production of proangiogenic cytokines such as VEGF. PD 0325901 enhances generation of induced pluripotent stem cells (iPSCs). PD 0325901 in combination with Vitamin C sustains mouse ES cells at an undifferentiated and hypomethylated state. PD 0325901 promotes myelin recovery in drug-induced demyelination in vivo in mice model. Orally active. F... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

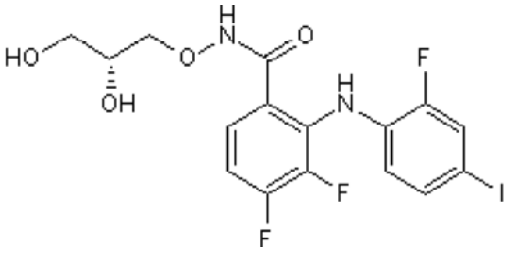
Batch Molecular Formula: $C_{16}H_{14}F_3IN_2O_4$

Batch Molecular Weight: 482.19

Physical Appearance: Off-white solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 25 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Licensing Information:

Sold for research purposes under agreement from Pfizer Inc.

References:

Suo *et al* (2019) Inhibition of MAPK/ERK pathway promotes oligodendrocytes generation and recovery of demyelinating diseases. Glia ***67*** 1320. PMID: 30815939.

Li *et al* (2018) An alternative culture method to maintain genomic hypomethylation of mouse embryonic stem cells using MEK inhibitor PD0325901 and vitamin C. J.Vis.Exp. ***136*** 56391. PMID: 29912180.

Koehler *et al* (2014) 3D mouse embryonic stem cell culture for generating inner ear organoids. Nat.Protoc. ***9*** 1299. PMID: 24784820.