Print Date: Jun 13th 2019

Certificate of Analysis

www.tocris.com

Product Name: **PD 173074** **Catalog No.: 3044** **Batch No.: 5**

CAS Number: 219580-11-7

IUPAC Name: *N*-[2-[[4-(Diethylamino)butyl]amino]-6-(3,5-dimethoxyphenyl)pyrido[2,3-*d*]pyrimidin-7-yl]-*N*'-(1,1-dimethylethyl)urea

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{28}H_{41}N_7O_3.¼H_2O$

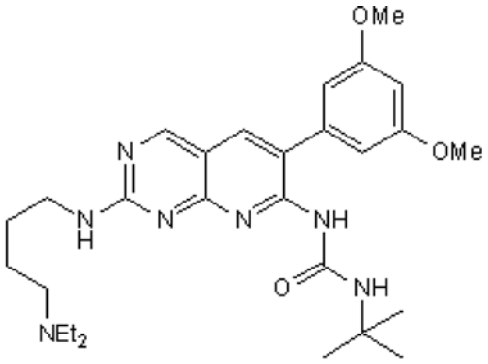
Batch Molecular Weight: 528.17

Physical Appearance: Yellow solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.2% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.67	7.92	18.56
Found	63.77	7.83	18.59

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Description:

Selective FGFR1 and FGFR3 inhibitor (IC_{50} values are 5, 21.5, ~100, 17600 and 19800 nM for FGFR3, FGFR1, VEGFR2, PDGFR and c-Src respectively, and > 50000 nM for EGFR, InsR, MEK and PKC). Inhibits VEGF- and FGF-induced angiogenesis in the mouse cornea model of angiogenesis. Inhibits proliferation and differentiation of oligodendrocyte progenitors. Also promotes mESC self-renewal, facilitates the conversion of mouse epiblast stem cells to an earlier pluripotency state and inhibts differentiation of miPSCs to cardiomyocytes. Suppresses cell proliferation in cell lines expressing mutated FGFR3 protein. Blocks tumor growth in H510 and H69 SCL... Please see product datasheet on www.tocris.com for full description.

Physical and Chemical Properties:

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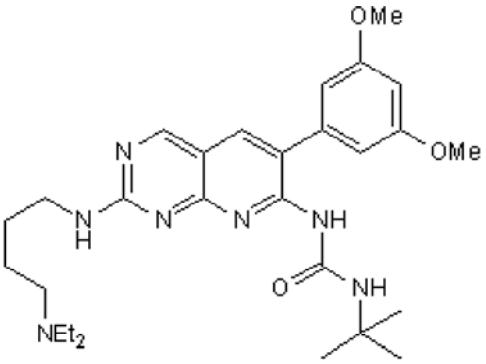
Physical Appearance: Yellow solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 100 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:

Chan *et al* (2010) PLoS One ***5*** e14414.

Miyake *et al* (2010) 1-*tert*-butyl-3-[6-(3,5-dimethoxy-phenyl)-2-(4-diethylamino-butylamino)-pyrido[2,3-*d*]pyrimidin-7-yl]-urea (PD173074), a selective tyrosine kinase inhibitor of fibroblast growth factor receptor-3 (FGFR3), inhibits cell proliferation of bla J.Pharmacol.Exp.Ther. ***332*** 795. PMID: 19955487.

Pardo *et al* (2010) The fibroblast growth factor receptor inhibitor PD173074 blocks small cell lung cancer growth *in vitro* and *in vivo*. Cancer Res. ***69*** 8645.

Zhou *et al* (2010) Conversion of mouse epiblast stem cells to an earlier pluripotency state by small molecules. J.Biol.Chem. ***285*** 29676. PMID: 20705612.

Buehr *et al* (2008) Capture of authentic embryonic stem cells from rat blastocysts. Cell ***135*** 1287. PMID: 19109897.

Trudel *et al* (2004) Inhibition of fibroblast growth factor receptor 3 induces differentiation and apoptosis in t(4;14) myeloma. Neoplasia ***103*** 3521.

Bansal *et al* (2003) Specific inhibitor of FGF receptor signaling: FGF-2-mediated effects on proliferation, differentiation, and MAPK activation are inhibited by PD173074 in oligodendrocyte-lineage cells. J.Neurosci.Res. ***74*** 486. PMID: 14598202.

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