TOCRIS
a bio-techne brand

Print Date: Feb 4th 2019

Certificate of Analysis

www.tocris.com

Product Name: **Pyridone 6** **Catalog No.: 6577** **Batch No.: 1**

CAS Number: 457081-03-7

IUPAC Name: 2-(1,1-Dimethylethyl)-9-fluoro-1,6-dihydro-7*H*-benz[h]imidazo[4,5-*f*]isoquinolin-7-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{18}H_{16}FN_3O.1¼H_2O$

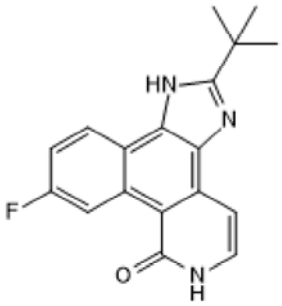
Batch Molecular Weight: 331.86

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.3% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	65.15	5.62	12.66
Found	64.93	5.48	12.57

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Description:

Potent pan-JAK inhibitor; ATP-competitive inhibitor of JAK 1/2/3 and Tyk2 (IC_{50} values are 1, 5, 15 and 1 nM, respectively). Inhibits other kinases tested at 130 nM to >10 µM. Inhibits IL-2- and IL-4-dependent proliferation of CTLL cells and blocks STAT5 phosphorylation. Also inhibits Th1 and Th2 development, and promotes Th17 differentiation from naive T cells. When used in combination with Retinoic acid, LY 294002 and CCG 1423, it induces intermediate mesoderm differentiation from ESCs. Inhibits growth of primary myeloma cells grown in the presence of bone marrow stromal cells. Cell-permeable. Please see product datasheet on www.tocris.com for full description.

Physical and Chemical Properties:

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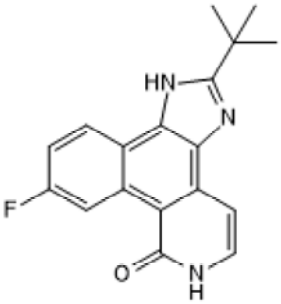
Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 50 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.

References:

Mae *et al* (2010) Combination of small molecules enhances differentiation of mouse embryonic stem cells into intermediate mesoderm through BMP7-positive cells. Biochem.Biophys.Res.Commun. ***393*** 877. PMID: 20171952.

Thompson *et al* (2002) Photochemical preparation of a pyridone containing tetracycle: a Jak protein kinase inhibitor. Bioorg.Med.Chem.Lett. ***12*** 1219. PMID: 11934592.