Certificate of Analysis

Product Name: **PP 1** **Catalog No.: 1397** **Batch No.: 2**

CAS Number: 172889-26-8

IUPAC Name: 1-(1,1-Dimethylethyl)-1-(4-methylphenyl)-1*H*-pyrazolo[3,4-*d*]pyrimidin-4-amine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{19}N_5$

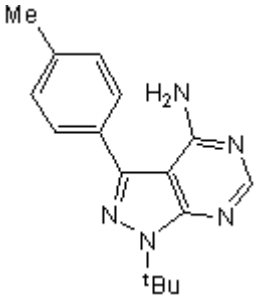
Batch Molecular Weight: 281.36

Physical Appearance: White crystalline solid

Solubility: DMSO to 10 mM
ethanol to 10 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.3 (Dichloromethane:Methanol [98:2])

Melting Point: Between 200 - 201°C

HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	68.3	6.81	24.89
Found	68.16	6.83	24.78

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Description:

Potent inhibitor of Src-family tyrosine kinases. Inhibits $p56^{lck}$ and $p59^{fynT}$ (IC_{50} values are 5 and 6 nM respectively). Displays > 8000-fold selectivity over ZAP-70 and JAK2. Also moderately inhibits p38, CSK, PDGF receptors, RET-derived oncoproteins, c-Kit and Bcr-Abl.

Physical and Chemical Properties:

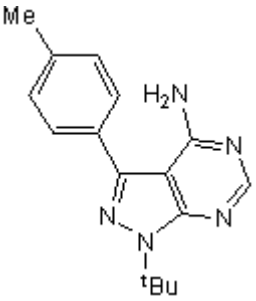
Batch Molecular Formula: $C_{16}H_{19}N_5$

Batch Molecular Weight: 281.36

Physical Appearance: White crystalline solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at +4°C

Solubility & Usage Info:

DMSO to 10 mM
ethanol to 10 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:

Hanke *et al* (1996) Discovery of a novel, potent, and src family-selective tyrosine kinase inhibitor. J.Biol.Chem. ***271*** 695. PMID: 8557675.

Liu *et al* (1999) Structural basis for selective inhibition of Src family kinases by PP1. Chem.Biol. ***6*** 671. PMID: 10467133.

Carlomagno *et al* (2002) The kinase inhibitor PP1 blocks tumorigenesis induced by *RET* oncogenes. Cancer Res. ***62*** 1077. PMID: 11861385.

Bain *et al* (2003) The specificities of protein kinase inhibitors: an update. Biochem.J. ***371*** 199. PMID: 12534346.

Tatton *et al* (2003) The src-selective kinase inhibitor PP1 also inhibits Kit and Bcr-Abl tyrosine kinases. J.Biol.Chem. ***278*** 4847. PMID: 12475982.