

## Certificate of Analysis

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**Product Name:** ETP 45658

**Catalog No.:** 4702

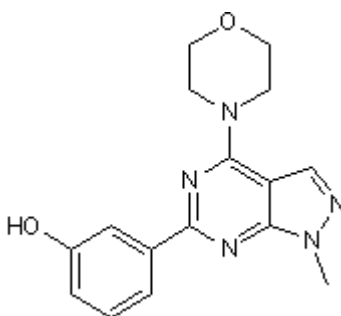
**Batch No.:** 1

CAS Number: 1198357-79-7

IUPAC Name: 3-[1-Methyl-4-(4-morpholinyl)-1*H*-pyrazolo[3,4-*d*]pyrimidin-6-yl]phenol

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>16</sub>H<sub>17</sub>N<sub>5</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 311.34  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.2 (Ethyl acetate:Petroleum ether [1:1])  
**HPLC:** Shows 99.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	61.72	5.5	22.49
Found	61.8	5.52	22.26

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

PI 3-kinase inhibitor (IC<sub>50</sub> values are 22, 30, 129 and 710 nM for PI 3-K $\alpha$ , PI 3-K $\delta$ , PI 3-K $\beta$  and PI 3-K $\gamma$  respectively). Also inhibits DNA-PK and mTOR (IC<sub>50</sub> values are 70.6 and 152 nM respectively). Inhibits proliferation of multiple cancer cell lines in vitro and reduces Akt phosphorylation levels in vivo.

**Physical and Chemical Properties:**

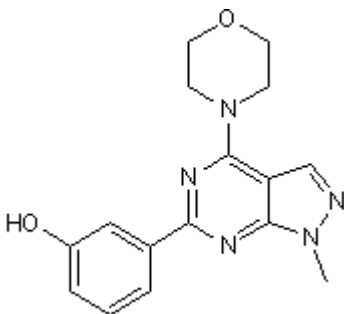
Batch Molecular Formula: C<sub>16</sub>H<sub>17</sub>N<sub>5</sub>O<sub>2</sub>

Batch Molecular Weight: 311.34

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Link et al** (2009) Chemical interrogation of FOXO3a nuclear translocation identifies potent and selective inhibitors of phosphoinositide 3-kinases. *J.Biol.Chem.* **284** 28392. PMID: 19690175.

**Hill et al** (2014) A novel phosphatidylinositol 3-kinase (PI3K) inhibitor directs a potent FOXO-dependent, p53-independent cell cycle arrest phenotype characterized by the differential induction of a subset of FOXO-regulated genes. *Breast Cancer Res.* **16** 482. PMID: 25488803.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO 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.

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**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel: +1 612 379 2956