

## Certificate of Analysis

**Product Name:** PF 4708671

**Catalog No.:** 4032

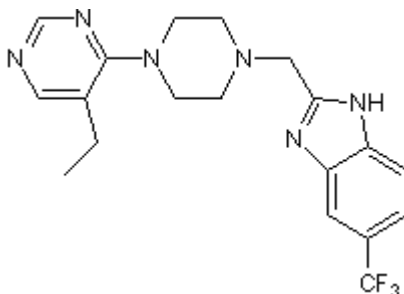
**Batch No.:** 3

CAS Number: 1255517-76-0

IUPAC Name: 2-[[4-(5-Ethylpyrimidin-4-yl)piperazin-1-yl]methyl]-5-(trifluoromethyl)-1*H*-benzo[*d*]imidazole

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>19</sub>H<sub>21</sub>F<sub>3</sub>N<sub>6</sub>  
**Batch Molecular Weight:** 390.41  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 50 mM  
 ethanol to 50 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.2% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	58.45	5.42	21.53
Found	58.14	5.43	21.25

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

**Product Name:** PF 4708671

**Catalog No.:** 4032

**Batch No.:** 3

CAS Number: 1255517-76-0

IUPAC Name: 2-[[4-(5-Ethylpyrimidin-4-yl)piperazin-1-yl]methyl]-5-(trifluoromethyl)-1H-benzo[d]imidazole

**Description:**

Cell-permeable inhibitor of p70 ribosomal S6 kinase (S6K1 isoform) ( $K_i = 20$  nM;  $IC_{50} = 160$  nM). Suppresses the S6K1-mediated phosphorylation of S6, Rictor and mTOR in response to IGF1; displays no effect on the activity of RSK and MSK in vivo. Exhibits no significant inhibition of S6K2 or other AGC kinases (e.g. Akt, PKA and ROCK) in vitro.

**Physical and Chemical Properties:**

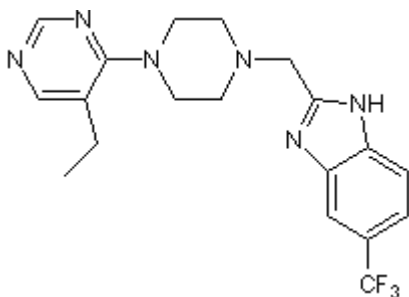
Batch Molecular Formula:  $C_{19}H_{21}F_3N_6$

Batch Molecular Weight: 390.41

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

Pearce *et al* (2010) Characterisation of PF-4708671 a novel and highly specific inhibitor of p70 ribosomal S6 kinase (S6K1). *Biochem.J.* **431** 245. PMID: 20704563.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 50 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.

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

**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