

## Certificate of Analysis

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**Product Name:** GW 2580

**Catalog No.:** 5673

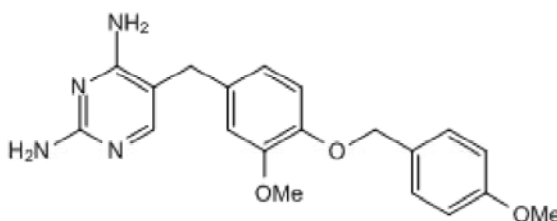
**Batch No.:** 2

CAS Number: 870483-87-7

IUPAC Name: 5-[[3-Methoxy-4-[(4-methoxyphenyl)methoxy]phenyl]methyl]-2,4-pyrimidinediamine

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>20</sub>H<sub>22</sub>N<sub>4</sub>O<sub>3</sub>  
**Batch Molecular Weight:** 366.41  
**Physical Appearance:** Off White solid  
**Solubility:** DMSO to 50 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.1% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	65.56	6.05	15.29
Found	65.59	6.06	15.37

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](http://www.tocris.com/distributors)

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**Description:**

Potent and selective cFMS kinase inhibitor (IC<sub>50</sub> = 0.06 μM). Exhibits selectivity for cFMS kinase over 186 other kinases. Inhibits CSF-1-induced growth of rat monocytes *in vitro*. Also inhibits bone resorption in osteoclast cultures, as well as connective tissue and bone destruction in a rat adjuvant arthritis model. Suppresses M-NFS-60 tumor cell growth in mice. Orally bioavailable.

**Physical and Chemical Properties:**

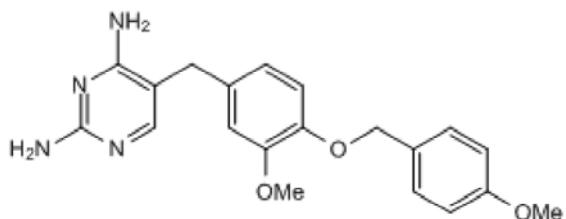
Batch Molecular Formula: C<sub>20</sub>H<sub>22</sub>N<sub>4</sub>O<sub>3</sub>

Batch Molecular Weight: 366.41

Physical Appearance: Off White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO 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:**

**Conway *et al*** (2008) Effects of the cFMS kinase inhibitor 5-(3-methoxy-4-((4-methoxybenzyl)oxy)benzyl)pyrimidine-2,4-diamine (GW2580) in normal and arthritic rats. *J.Pharmacol.Exp.Ther.* **326** 41. PMID: 18434589.

**Conway *et al*** (2005) Inhibition of colony-stimulating-factor-1 signaling *in vivo* with the orally bioavailable cFMS kinase inhibitor GW2580. *Proc.Natl.Acad.Sci.U.S.A.* **102** 16078. PMID: 16249345.

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