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TOCRIS

Print Date: Feb 26th 2024

Certificate of Analysis

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Product Name: **GW 843682X** **Catalog No.: 2977** **Batch No.: 2**

CAS Number: 660868-91-7

IUPAC Name: 5-(5,6-Dimethoxy-1*H*-benzimidazol-1-yl)-3-[[2-(trifluoromethyl)phenyl]methoxy]-2-thiophenecarboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{22}H_{18}F_3N_3O_4S.¼H_2O$

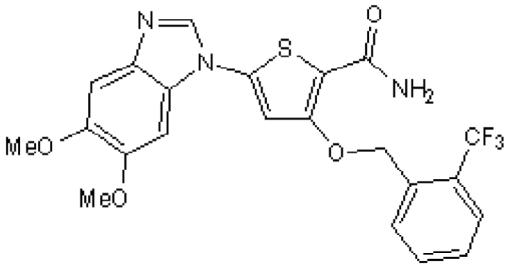
Batch Molecular Weight: 481.96

Physical Appearance: Pale yellow solid

Solubility: DMSO to 75 mM
ethanol to 5 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.33 (Dichloromethane:Methanol [9:1])

HPLC: Shows 98.4% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	54.83	3.87	8.72
Found	54.75	3.51	8.32

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Description:

GW 843682X is a selective inhibitor of polo-like kinase 1 (PLK1) and polo-like kinase 3 (PLK3) (IC_{50} values are 2.2 and 9.1 nM respectively). Displays > 100-fold selectivity over ~30 other kinases tested including cdk1 and cdk2. Inhibits proliferation of most tumor cells in vitro and is selective over normal diploid fibroblasts.

Physical and Chemical Properties:

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Minimum Purity: ≥98%

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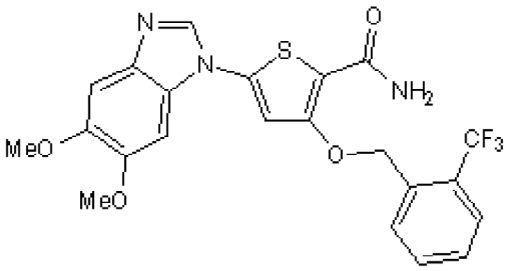

Storage: Desiccate at +4°C

Solubility & Usage Info:

DMSO to 75 mM
ethanol to 5 mM

When purchased as a 1mg unit, this product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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.

Licensing Information:

Sold for research purposes under agreement from GlaxoSmithKline

References:

Lansing *et al* (2007) *In vitro* biological activity of a novel small-molecule inhibitor of polo-like kinase 1. Mol.Cancer Ther. ***6*** 450. PMID: 17267659.

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