

Certificate of Analysis

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Product Name: PHT 427

Catalog No.: 4598

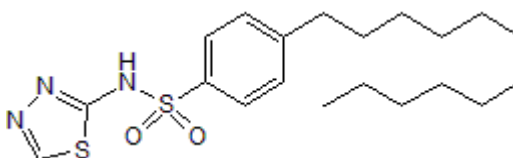
Batch No.: 1

CAS Number: 1191951-57-1

IUPAC Name: 4-Dodecyl-N-1,3,4-thiadiazol-2-yl-benzenesulfonamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₃₁N₃O₂S₂
Batch Molecular Weight: 409.61
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.47 (Chloroform:Methanol [9:1])
HPLC: Shows 99.6% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	58.64	7.63	10.26
Found	58.89	7.59	10.34

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

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Description:

Dual Akt and PDK1 inhibitor; binds the pleckstrin homology (PH) domain of Akt and PDK1 (K_i values are 2.7 and 5.2 μ M, respectively). Inhibits Akt phosphorylation and Akt downstream targets; also induces apoptosis *in vitro*. Displays synergistic antitumor effect when combined with chemotherapeutics in breast cancer mouse models.

Physical and Chemical Properties:

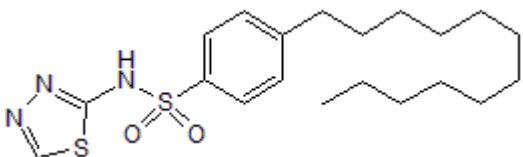
Batch Molecular Formula: $C_{20}H_{31}N_3O_2S_2$

Batch Molecular Weight: 409.61

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



References:

Moses et al (2009) *In vitro* and *in vivo* activity of novel small-molecule inhibitors targeting the pleckstrin homology domain of protein kinase B/AKT. *Cancer Res.* **69** 5073. PMID: 19491272.

Meillet et al (2010) Molecular pharmacology and antitumor activity of PHT-427, a novel Akt/phosphatidylinositide-dependent protein kinase 1 pleckstrin homology domain inhibitor. *Mol.Cancer Ther.* **9** 706. PMID: 20197390.

Storage: Store at -20°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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