

**Product Name:** PHT 427

**Catalog No.:** 4598

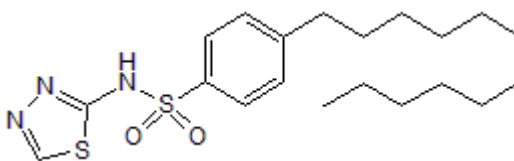
**Batch No.:** 1

**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:** C<sub>20</sub>H<sub>31</sub>N<sub>3</sub>O<sub>2</sub>S<sub>2</sub>  
**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<sub>f</sub> = 0.47 (Chloroform:Methanol [9:1])  
**HPLC:** Shows 99.6% purity  
**<sup>1</sup>H 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

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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  $\mu$ 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:**

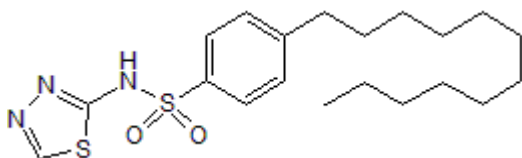
Batch Molecular Formula:  $C_{20}H_{31}N_3O_2S_2$

Batch Molecular Weight: 409.61

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**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.

**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.

**Meuillet *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.

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