

**Product Name:** D9

**Catalog No.:** 5921

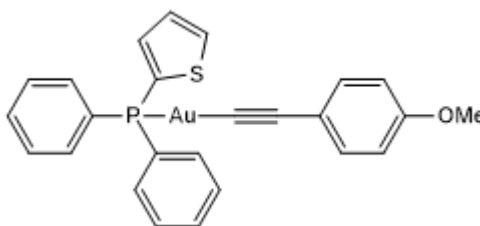
**Batch No.:** 1

CAS Number: 1527513-89-8

IUPAC Name: (Diphenyl-2-thienylphosphine-κP)[2-(4-methoxyphenyl)ethynyl]gold

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>25</sub>H<sub>20</sub>AuOPS  
**Batch Molecular Weight:** 596.43  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 98.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	50.34	3.38	
Found	50.67	3.47	0.05

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

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**Description:**

Potent thioredoxin reductase (TrxR) inhibitor ( $EC_{50} = 2.8$  nM,  $IC_{50} = 0.03$  and  $0.1$  μM in MCF-7 cells and HT-29 cells, respectively). Highly stable in vivo; exhibits no significant ligand exchange with albumin. Inhibits tumor proliferation in vitro and in vivo by inducing cell death. Selectively kills cancer cells.

**Physical and Chemical Properties:**

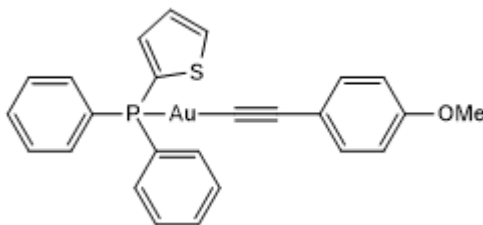
Batch Molecular Formula:  $C_{25}H_{20}AuOPS$

Batch Molecular Weight: 596.43

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at  $-20^{\circ}C$

**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 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  $45-60^{\circ}C$  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  $-20^{\circ}C$  or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Lin et al** (2015) pH-sensitive polymeric nanoparticles with gold(I) compound payloads synergistically induce cancer cell death through modulation of autophagy. *Mol.Pharm.* **12** 2869. PMID: 26101892.

**Zhang et al** (2014) Synthesis and molecular recognition studies on small-molecule inhibitors for thioredoxin reductase. *J.Med.Chem.* **57** 8132. PMID: 25249032.

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