

Product Name: Auranofin

Catalog No.: 4600

Batch No.: 1

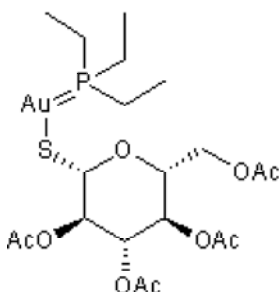
CAS Number: 34031-32-8

EC Number: 251-801-9

IUPAC Name: 1-Thio-β-D-glucofuranosyltriethylphosphine gold-2,3,4,6-tetraacetate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₃₄AuO₉PS
Batch Molecular Weight: 678.48
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 50 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = -58.6 (Concentration = 1, Solvent = Chloroform)
Microanalysis:

	Carbon Hydrogen Nitrogen	
Theoretical	35.41	5.05
Found	35.59	5.06

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

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Product Name: Auranofin

Catalog No.: 4600

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CAS Number: 34031-32-8

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IUPAC Name: 1-Thio-β-D-glucopyranosatotriethylphosphine gold-2,3,4,6-tetraacetate

Description:

Inhibitor of thioredoxin reductase (TrxR) (IC₅₀ = 20 nM; K_i = 4 nM for the NADPH-reduced form of human cytosolic TrxR). Thought to induce the mitochondrial permeability transition via inhibition of mitochondrial TrxR. Also exhibits anti-inflammatory and immunosuppressive activities; inhibits 5-lipoxygenase at high concentrations and stimulates LTA hydrolase at low concentrations. Also inhibits SARS-CoV-2 infection in Huh7 cell line (IC₅₀ = 1.4 μM)

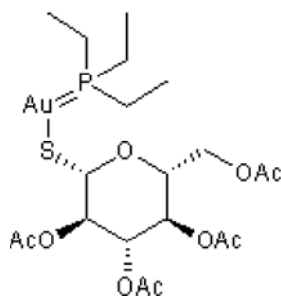
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References:

Kim et al (2007) Auranofin blocks interleukin-6 signalling by inhibiting phosphorylation of JAK1 and STAT3. *Immunology* **122** 607. PMID: 17645497.

Rigobello et al (2002) Induction of mitochondrial permeability transition by auranofin, a gold(I)-phosphine derivative. *Br.J.Pharmacol.* **136** 1162. PMID: 12163349.

Gromer et al (1998) Human placenta thioredoxin reductase. Isolation of the selenoenzyme, steady state kinetics, and inhibition by therapeutic gold compounds. *J.Biol.Chem.* **273** 20096. PMID: 9685351.

Storage: Store at RT

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

ethanol 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.

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