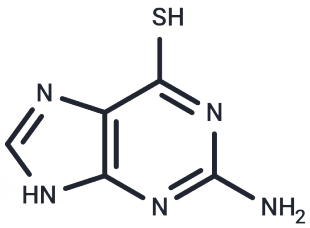
Data Sheet (Cat.No.T3089)

TargetMol

6-Thioguanine

Chemical Properties



CAS No. : 154-42-7

Formula: C5H5N5S

Molecular Weight: 167.19

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	6-Thioguanine (2-Amino-6-purinethiol) is an antineoplastic compound which also has antimetabolite action. The drug is used in the therapy of acute leukemia.
Targets(IC50)	Apoptosis,Endogenous Metabolite,Autophagy,DNA Methyltransferase,DUB,SARS-CoV
In vitro	6-Thioguanine selectively kills BRCA2-deficient tumors in xenograft models as effectively as PARP inhibitors. It eradicates cells and tumors that have developed resistance to PARP inhibitors or cisplatin through genetic reversal via the BRCA2 gene. Additionally, 6-Thioguanine is effective in eliminating PARP inhibitor-resistant tumors with BRCA1 deficiencies.
In vivo	6-Thioguanine is integrated into DNA, differing from typical DNA bases as it serves as a potent UVA chromophore with a peak absorbance at 342 nm. Its incorporation alters topoisomerase II-induced DNA cleavage both in the presence and absence of etoposide. Additionally, 6-Thioguanine induces similar apoptotic responses in mismatch repair-proficient and -deficient HCT116 and HeLa cells.

Solubility Information

Solubility	DMSO: 50 mg/mL (299.06 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.9812 mL	29.9061 mL	59.8122 mL
5 mM	1.1962 mL	5.9812 mL	11.9624 mL
10 mM	0.5981 mL	2.9906 mL	5.9812 mL
50 mM	0.1196 mL	0.5981 mL	1.1962 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

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