

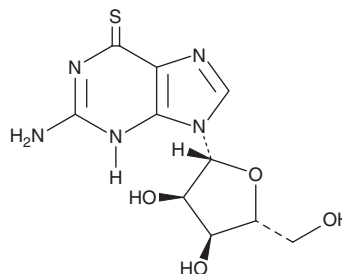
PRODUCT INFORMATION



6-Thioguanosine

Item No. 36539

CAS Registry No.: 85-31-4
Formal Name: 6-thio-guanosine
Synonyms: 6-Mercaptoguanosine, NSC 29422, 6-Thioguanine Ribonucleoside
MF: $C_{10}H_{13}N_5O_4S$
FW: 299.3
Purity: $\geq 98\%$
UV/Vis.: $\lambda_{\max}$: 210, 347 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

6-Thioguanosine is supplied as a solid. A stock solution may be made by dissolving the 6-thioguanosine in the solvent of choice, which should be purged with an inert gas. 6-Thioguanosine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 6-thioguanosine in these solvents is approximately 5 and 2 mg/ml, respectively.

Description

6-Thioguanosine is a thiopurine nucleoside.¹ Preincubation of 6-thioguanosine (10 and 100 μM , respectively) decreases uridine and methionine incorporation into ribosomal RNA in Novikoff-Hepatoma cells. It inhibits the germination of *B. anthracis* spores ($K_i = 98 \mu\text{M}$) and prevents spore-induced cytotoxicity in RAW 264.7 macrophages in a concentration-dependent manner.² 6-Thioguanosine is active against *E. coli* ($\text{IC}_{50} = 2 \mu\text{M}$).³ It reduces the proliferation of MOLT-4 leukemia cells ($\text{IC}_{50} = 0.19 \mu\text{M}$).⁴

References

1. Weiss, J.W. and Pitot, H.C. Inhibition of ribosomal RNA maturation in Novikoff hepatoma cells by toyocamycin, tubercidin, and 6-thioguanosine. *Cancer Res.* **34**(3), 581-587 (1974).
2. Akoachere, M., Squires, R.C., Nour, A.M., et al. Identification of an *in vivo* inhibitor of *Bacillus anthracis* spore germination. *J. Biol. Chem.* **282**(16), 12112-12118 (2007).
3. Hill, D.L. and Pittillo, R.F. Use of *Escherichia coli* mutants to evaluate purines, purine nucleosides, and analogues. *Antimicrob. Agents Chemother.* **4**(2), 125-132 (1973).
4. Vethe, N.T., Bremer, S., and Bergan, S. IMP dehydrogenase basal activity in MOLT-4 human leukaemia cells is altered by mycophenolic acid and 6-thioguanosine. *Scand. J. Clin. Lab. Invest.* **68**(4), 277-285 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 05/12/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM