



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic)



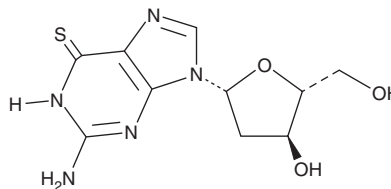
# PRODUCT INFORMATION



## 6-thio-2'-Deoxyguanosine

Item No. 19154

**CAS Registry No.:** 789-61-7  
**Formal Name:** 2'-deoxy-6-thio-guanosine  
**Synonyms:** 6-thio-dG, NSC 71261,  $\beta$ -Thioguanine deoxyriboside  
**MF:**  $C_{10}H_{13}N_5O_3S$   
**FW:** 283.3  
**Purity:**  $\geq 95\%$   
**UV/Vis.:**  $\lambda_{max}$ : 209, 259, 346 nm  
**Supplied as:** A crystalline solid  
**Storage:**  $-20^{\circ}\text{C}$   
**Stability:**  $\geq 2$  years



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

### Laboratory Procedures

6-thio-2'-Deoxyguanosine (6-thio-dG) is supplied as a crystalline solid. A stock solution may be made by dissolving the 6-thio-dG in the solvent of choice. 6-thio-dG is soluble in organic solvents such as DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 6-thio-dG in these solvents is approximately 20 mg/ml.

6-thio-dG is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 6-thio-dG should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 6-thio-dG has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

6-thio-dG is a nucleoside analog that is incorporated into *de novo*-synthesized telomeres by telomerase.<sup>1,2</sup> This induces telomerase dysfunction resulting in telomeric DNA damage and rapid cell death.<sup>1</sup> This process occurs in cells expressing telomerase but not in telomerase-negative cells.<sup>1</sup> DNA containing 6-thio-dG inhibits the function of RNase H, preventing the cleavage of DNA-RNA heteroduplexes.<sup>3</sup> In mouse xenograft studies using A549 lung cancer cells, 6-thio-dG causes a decrease in tumor growth rate associated with telomere dysfunction.<sup>1</sup>

### References

1. Mender, I., Gryaznov, S., Dikmen, Z.G., *et al.* Induction of telomere dysfunction mediated by the telomerase substrate precursor 6-thio-2'-deoxyguanosine. *Cancer Discov.* **5**(1), 82-95 (2015).
2. Tendian, S.W. and Parker, W.B. Interaction of deoxyguanosine nucleotide analogs with human telomerase. *Mol. Pharm.* **57**, 695-699 (2000).
3. Krynetskaia, N.F., Krynetski, E.Y., and Evans, W.E. Human RNase H-mediated RNA cleavage from DNA-RNA duplexes is inhibited by 6-deoxythioguanosine incorporation into DNA. *Mol. Pharm.* **56**, 841-848 (1999).

#### 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, 11/20/2019

#### 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](http://WWW.CAYMANCHEM.COM)