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

www.szabo-scandic.com

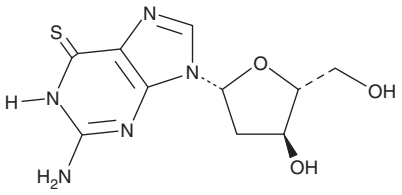
linkedin.com/company/szaboscandic

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, β-Thioguanine deoxyriboside
MF:	$C_{10}H_{13}N_5O_3S$
FW:	283.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 209, 259, 346 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥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.[1,2] This induces telomerase dysfunction resulting in telomeric DNA damage and rapid cell death.[1] This process occurs in cells expressing telomerase but not in telomerase-negative cells.[1] DNA containing 6-thio-dG inhibits the function of RNase H, preventing the cleavage of DNA-RNA heteroduplexes.[3] In mouse xenograft studies using A549 lung cancer cells, 6-thio-dG causes a decrease in tumor growth rate associated with telomere dysfunction.[1]

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).

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