



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### SZABO-SCANDIC Handels GmbH

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) 

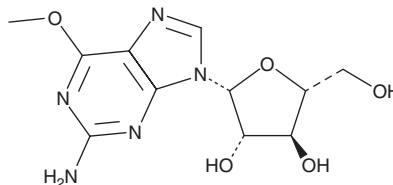
# PRODUCT INFORMATION



## Nelarabine

Item No. 20248

<b>CAS Registry No.:</b>	121032-29-9
<b>Formal Name:</b>	9-β-D-arabinofuranosyl-6-methoxy-9H-purin-2-amine
<b>Synonyms:</b>	GW 506U78, Nelzarabine
<b>MF:</b>	C <sub>11</sub> H <sub>15</sub> N <sub>5</sub> O <sub>5</sub>
<b>FW:</b>	297.3
<b>Purity:</b>	≥98%
<b>UV/Vis.:</b>	λ <sub>max</sub> : 211, 247, 281 nm
<b>Supplied as:</b>	A crystalline solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



### Laboratory Procedures

Nelarabine is supplied as a crystalline solid. A stock solution may be made by dissolving the nelarabine in the solvent of choice. Nelarabine is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of nelarabine in these solvents is approximately 10 and 3 mg/ml, respectively.

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

### Description

Nelarabine is a purine nucleoside analog that is used as a cytotoxic agent in hematological malignancies.<sup>1</sup> Nelarabine is converted into arabinosyl-guanine (ara-G) in the blood, and ara-G is selectively accumulated in T cells and malignant T-lymphoid cells, where it is phosphorylated to produce ara-GTP and incorporated into DNA.<sup>2,3</sup> This leads to DNA breaks, increased expression of Fas ligand, and apoptosis.<sup>1,3</sup> Ara-G is accumulated most effectively by acute lymphoid leukemia and chronic myeloid leukemia blasts.<sup>1</sup>

### References

1. Robak, T., Korycka, A., Lech-Maranda, E., *et al.* Current status of older and new purine nucleoside analogues in the treatment of lymphoproliferative diseases. *Molecules* **14**(3), 1183-1226 (2009).
2. Rodriguez, C.O., Jr., Mitchell, B.S., Ayres, M., *et al.* Arabinosylguanine is phosphorylated by both cytoplasmic deoxycytidine kinase and mitochondrial deoxyguanosine kinase. *Cancer Res.* **62**(11), 3100-3105 (2002).
3. Rodriguez, C.O., Jr., Stellrecht, C.M., and Gandhi, V. Mechanisms for T-cell selective cytotoxicity of arabinosylguanine. *Blood* **102**(5), 1842-1848 (2003).

#### 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.

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#### 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