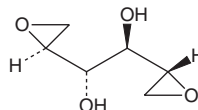


PRODUCT INFORMATION

Dianhydrogalactitol

Item No. 37705

CAS Registry No.: 23261-20-3
Formal Name: 1,2:5,6-dianhydro-galactitol
Synonyms: Dianhydrodulcitol, Dulcitol diepoxide, NSC 132313, VAL-083
MF: C₆H₁₀O₄
FW: 146.1
Purity: ≥95%
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

Dianhydrogalactitol is supplied as a solid. A stock solution may be made by dissolving the dianhydrogalactitol in the solvent of choice, which should be purged with an inert gas. Dianhydrogalactitol is soluble in DMSO.

Description

Dianhydrogalactitol is a hexitol epoxide DNA alkylating agent that has been found in *P. caesiopruinosa*.^{1,2} It induces N⁷-alkylation of guanine and interstrand DNA cross-links *in vitro*.¹ Dianhydrogalactitol (0.5-8 μM) halts the cell cycle at the G₂/M phase in U-251MG and T98G glioblastoma cells.³ It decreases the migration and invasion of U251 glioblastoma cells and tube formation of human umbilical vein endothelial cells (HUVECs) when used at a concentration of 12.5 μg/ml.⁴ Dianhydrogalactitol (2.5 mg/kg) increases survival in a U-251MG mouse xenograft model when administered in combination with the alkylating agent prodrug temozolomide (Item No. 14163).³

References

1. Institóris, E. and Tamás, J. Alkylation by 1,2:5,6-dianhydrogalactitol of deoxyribonucleic acid and guanosine. *Biochem. J.* **185**(3), 659-666 (1980).
2. Shanmuganm, K., Srinivasan, M., and Neelakantan, H. Insights into *in vitro* phenotypic plasticity, growth and secondary metabolites of the mycobiont isolated from the lichen *Platygramme caesiopruinosa*. *Arch. Microbiol.* **204**(1), 90 (2021).
3. Jiménez-Alcázar, M., Curiel-García, Á., Nogales, P., et al. Dianhydrogalactitol overcomes multiple temozolomide resistance mechanisms in glioblastoma. *Mol. Cancer Ther.* **20**(6), 1029-1038 (2021).
4. Jiang, X., Huang, Y., Wang, X., et al. Dianhydrogalactitol, a potential multitarget agent, inhibits glioblastoma migration, invasion, and angiogenesis. *Biomed. Pharmacother.* **91**, 1065-1074 (2017).

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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