

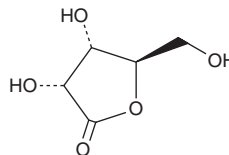
PRODUCT INFORMATION



D-(+)-Ribonic Acid γ -lactone

Item No. 39293

CAS Registry No.: 5336-08-3
Formal Name: γ -lactone D-ribonic acid
Synonym: NSC 1031
MF: C₅H₈O₅
FW: 148.1
Purity: \geq 98%
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

D-(+)-Ribonic acid γ -lactone is supplied as a solid. A stock solution may be made by dissolving the D-(+)-ribonic acid γ -lactone in the solvent of choice, which should be purged with an inert gas. D-(+)-Ribonic acid γ -lactone is soluble in DMSO. D-(+)-Ribonic acid γ -lactone is slightly soluble in acetonitrile.

D-(+)-Ribonic acid γ -lactone is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

D-(+)-Ribonic acid γ -lactone is an oxidized derivative of ribose and a synthetic material.¹ It has been used as a starting material in the synthesis of the ionophore antibiotic lasalocid (Item No. 15505), the natural products aristeromycin and (-)-neplanocin A (Item No. 10584), as well as an intermediate in the synthesis of ganglioside G_{M1} mimetic cholera toxin binder ligands.¹⁻³

References

1. Ireland, R.E., Anderson, R.C., Badoud, R., *et al.* The total synthesis of ionophore antibiotics. A convergent synthesis of lasalocid A (X537A). *J. Am Chem. Soc.* **105 (7)**, 1988-2006 (1983).
2. Wolfe, M.S., Anderson, B.L., Borcharding, D.R., *et al.* Enantiospecific syntheses of aristeromycin and neplanocin A. *J. Org. Chem.* **55(15)**, 4712-4717 (1990).
3. Arosio, D., Vrasidas, I., Valentini, P., *et al.* Synthesis and cholera toxin binding properties of multivalent GM1 mimics. *Org. Biomol. Chem.* **2(14)**, 2113-2124 (2004).

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, 02/15/2024

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