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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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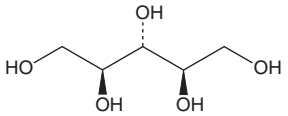
PRODUCT INFORMATION

Ribitol

Item No. 27362

CAS Registry No.:	488-81-3
Synonyms:	Adonitol, NSC 16868
MF:	$C_5H_{12}O_5$
FW:	152.1
Purity:	≥98%
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

Ribitol is supplied as a crystalline solid. A stock solution may be made by dissolving the ribitol in the solvent of choice, which should be purged with an inert gas. Ribitol is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ribitol in these solvents is approximately 25 and 5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ribitol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ribitol in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ribitol is a pentose sugar alcohol derived from ribose *in vivo via* the pentose phosphate pathway.[1] It is a component of the glycopolymer teichoic acid in bacterial cell walls.[2] Levels of ribitol are increased in the brain, cerebrospinal fluid, urine, and plasma of a patient with ribose-5-phosphate isomerase (RPI) deficiency, an extremely rare inborn error of metabolism characterized by a heterozygous frameshift mutation and missense allele in the *RPI* gene leading to leukoencephalopathy and mild peripheral polyneuropathy.[1]

References

1. Huck, J.H.J., Verhoeven, N.M., Struys, E.A., *et al.* Ribose-5-phosphate isomerase deficiency: New inborn error in the pentose phosphate pathway associated with a slowly progressive leukoencephalopathy. *Am. J. Hum. Genet.* **74(4)**, 745-751 (2004).
2. Vinogradov, E., Sadovskaya, I., Li, J., *et al.* Structural elucidation of the extracellular and cell-wall teichoic acids of *Staphylococcus aureus* MN8m, a biofilm forming strain. *Carbohydr. Res.* **341(6)**, 738-743 (2006).

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