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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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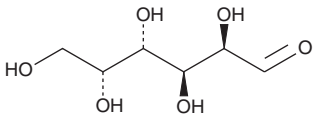
PRODUCT INFORMATION

D-Galactose

Item No. 20890

CAS Registry No.:	59-23-4
Formal Name:	D-galactose
Synonym:	D-(+)-Galactose
MF:	$C_6H_{12}O_6$
FW:	180.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 260 nm
Supplied as:	A crystalline solid
Storage:	Room temperature
Stability:	≥2 years



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

Laboratory Procedures

D-Galactose is supplied as a crystalline solid. A stock solution may be made by dissolving the D-galactose in the solvent of choice, which should be purged with an inert gas. D-Galactose is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of D-galactose in ethanol is approximately 1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

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 D-galactose can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of D-galactose in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

D-Galactose is a natural aldohexose and C-4 epimer of glucose. D-galactose is converted enzymatically into D-glucose for metabolism or polysaccharides for storage. Chronic, systemic exposure to D-galactose accelerates senescence in invertebrates and mammals and has been used as a model for aging.[1] In bacteria, D-galactose is imported by a methyl-galactoside transport system to drive chemotaxis.[2]

References

1. Cui, X., Zuo, P. Zhang, Q., *et al.* Chronic systemic D-galactose exposure induces memory loss, neurodegeneration, and oxidative damage in mice: Protective effects of R-α-lipoic acid. *J. Neurosci. Res.* **84(3)**, 647-654 (2006).
2. Borrok, M.J., Kiessling, L.L., and Forest, K.T. Conformational changes of glucose/galactose-binding protein illuminated by open, unliganded, and ultra-high-resolution ligand-bound structures. *Protein Sci.* **16(6)**, 1032-1041 (2007).

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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