

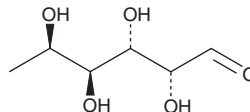
# PRODUCT INFORMATION



## D-(+)-Fucose

Item No. 34343

**CAS Registry No.:** 3615-37-0  
**Formal Name:** 6-deoxy-D-galactose  
**Synonyms:** D-Fucose, Rhodoseose  
**MF:** C<sub>6</sub>H<sub>12</sub>O<sub>5</sub>  
**FW:** 164.2  
**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

D-(+)-Fucose is supplied as a solid. A stock solution may be made by dissolving the D-(+)-fucose in the solvent of choice, which should be purged with an inert gas. D-(+)-Fucose is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of D-(+)-fucose in these solvents is approximately 30 and 15 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 D-(+)-fucose can be prepared by directly dissolving the solid in aqueous buffers. The solubility of D-(+)-fucose 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-(+)-Fucose is a monosaccharide that is an enantiomer of L-(-)-fucose (Item No. 16479) and analog of L-arabinose.<sup>1</sup> It inhibits induction of the L-arabinose operon and has been used to increase the yield and activity of recombinant proteins.<sup>2,3</sup>

### References

1. Flowers, H.M. Chemistry and biochemistry of D- and L-fucose. *Advances in Carbohydrate Chemistry and Biochemistry*. Tipson, R.S. and Horton, D., editors, *Academic Press* (1981).
2. Beverin, S., Sheppard, D.E., and Park, S.S. D-Fucose as a gratuitous inducer of the L-arabinose operon in strains of *Escherichia coli* B-r mutant in gene *araC*. *J. Bacteriol.* **107(1)**, 79-86 (1971).
3. Jung, K.-H., Park, Y.-S., Yeon, J.-H., et al. Improving the yield of soluble 6xHis-tagged interferon- $\alpha$  via the addition of repressor of the *araBAD* promoter system in *Escherichia coli*. *Biotechnol. Lett.* **30(9)**, 1577-1582 (2008).

#### 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

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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