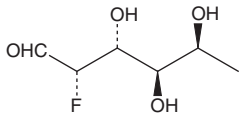
PRODUCT INFORMATION

2-deoxy-2-fluoro L-Fucose

Item No. 17171

CAS Registry No.: 70763-62-1
Formal Name: 2,6-dideoxy-2-fluoro-L-galactose
MF: $C_6H_{11}FO_4$
FW: 166.1
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

2-deoxy-2-fluoro L-Fucose is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-deoxy-2-fluoro L-fucose in the solvent of choice, which should be purged with an inert gas. 2-deoxy-2-fluoro L-Fucose is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 2-deoxy-2-fluoro L-fucose in these solvents is approximately 0.25, 30, and 20 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 2-deoxy-2-fluoro L-fucose can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 2-deoxy-2-fluoro L-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

2-deoxy-2-fluoro L-Fucose is a fluorinated fucose analog. It can be metabolized inside the cell to a substrate-based inhibitor of fucosyltransferases.[1] Alternatively, it can be converted *in vitro* to GDP-2-deoxy-2-fluoro L-fucose, a competitive inhibitor of α1,3-fucosyltransferase V (K_i = 4.2 µM).[2]

References

1. Rillahan, C.D., Antonopoulos, A., Lefort, C.T., *et al.* Global metabolic inhibitors of sialyl- and fucosyltransferases remodel the glycome. *Nat. Chem. Biol.* **8(7)**, 661-668 (2012).
2. Wong, C.H. and Hayashi, T. Process for preparing nucleotide inhibitors of glycosyltransferases. *The Scripps Research Institute*. **5,770,407** (1998).

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