1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{6}\text{H}_{12}\text{O}_{5} \)
Batch Molecular Weight: 164.16
Physical Appearance: White solid
Solubility:
- Water to 100 mM
- DMSO to 100 mM
Storage: Store at +4°C

2. ANALYTICAL DATA

Melting Point: Between 146 - 147°C
\(^1\text{H NMR:} \) Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation:
\( [\alpha]_D = +43.8 \) (Concentration = 2, Solvent = Water)
Microanalysis:

<table>
<thead>
<tr>
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<th>Theoretical</th>
<th>Found</th>
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<tbody>
<tr>
<td>C</td>
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<td>43.85</td>
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<tr>
<td>H</td>
<td>7.37</td>
<td>7.38</td>
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Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use
Product Name: 2-Deoxy-D-glucose
CAS Number: 154-17-6
IUPAC Name: 2-Deoxy-D-arabino-hexose

Description:
Non-metabolizable glucose analog. Inhibits phosphorylation of glucose by hexokinase; causes depletion of cellular ATP. Also inhibits phosphoglucose isomerase (PGI) competitively. Causes cell cycle inhibition and cell death in in vitro models of hypoxia; blocks tumor cell growth in animal models. Also shown to induce the unfolded protein response (UPR).

Physical and Chemical Properties:
Batch Molecular Formula: C_6H_12O_5
Batch Molecular Weight: 164.16
Physical Appearance: White solid

Batch Molecular Structure:

Storage: Store at +4°C

Solubility & Usage Info:
water to 100 mM
DMSO to 100 mM

Stability and Solubility Advice:
Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References: