**PRODUCT INFORMATION**

**6-NBDG**

*Item No. 13961*

**CAS Registry No.:** 108708-22-1

**Formal Name:** 6-deoxy-6-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]-D-glucose

**Synonym:** 6-NBD-Glucose

**MF:** C₁₂H₁₄N₄O₈

**FW:** 342.3

**Purity:** ≥ 98%

**UV/Vis.:** λ max: 226, 265, 331, 463 nm

**Ex./Em. Max:** 465/535 nm

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥ 1 year

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

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**Laboratory Procedures**

6-NBDG is supplied as a crystalline solid. A stock solution may be made by dissolving the 6-NBDG in the solvent of choice. 6-NBDG is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 6-NBDG in ethanol is approximately 10 mg/ml in DMSO and DMF. 6-NBDG is slightly soluble in ethanol.

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 6-NBDG can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 6-NBDG in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

**Description**

6-NBDG is a non-hydrolyzable fluorescent glucose analog that is used to monitor glucose uptake and transport in living cells.¹–³ 6-NBDG has been validated as a probe for the glucose transporter GLUT1 in cells.⁴ The fluorophore NBD displays excitation/emission maxima of 465/535 nm.

**References**