

# PRODUCT INFORMATION

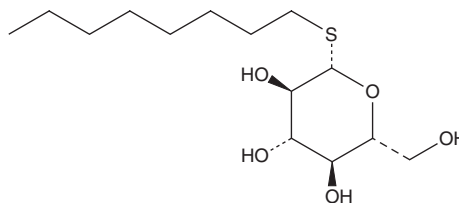


## n-Octyl-β-D-thioglucopyranoside

Item No. 17184

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**CAS Registry No.:** 85618-21-9  
**Formal Name:** octyl 1-thio-β-D-glucopyranoside  
**Synonyms:** Octylthioglucoside, OTG  
**MF:** C<sub>14</sub>H<sub>28</sub>O<sub>5</sub>S  
**FW:** 308.4  
**Purity:** ≥98%  
**Supplied as:** A crystalline 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

n-Octyl-β-D-thioglucopyranoside (OTG) is supplied as a crystalline solid. A stock solution may be made by dissolving the OTG in the solvent of choice, which should be purged with an inert gas. OTG is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of OTG in ethanol is approximately 20 mg/ml and approximately 15 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 OTG can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of OTG in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

OTG is a low molecular weight nonionic detergent that is commonly used for cell lysis and non-denaturing protein solubilization.<sup>1,2</sup> It has a critical micelle concentration of 7.9-9.0 mM.<sup>1,3</sup> OTG is stable in aqueous solutions, resistant to degradation by β-glucosidases, and easily removed by dialysis.<sup>1,2</sup>

### References

1. Saito, S. and Tsuchiya, T. Characteristics of n-octyl β-D-thioglucopyranoside, a new non-ionic detergent useful for membrane biochemistry. *Biochem. J.* **222(3)**, 829-832 (1984).
2. Tsuchiya, T. and Saito, S. Use of n-octyl-β-D-thioglucoside, a new nonionic detergent, for solubilization and reconstitution of membrane proteins. *J. Biochem.* **96(5)**, 1593-1597 (1984).
3. Ruiz, C.-C., Molina-Bolívar, J.A., Hierrezuelo, J.M., *et al.* Self-assembly, surface activity and structure of n-octyl-β-D-thioglucopyranoside in ethylene glycol-water mixtures. *Int. J. Mol. Sci.* **14(2)**, 3228-3253 (2013).

#### 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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