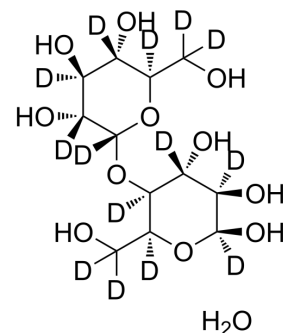


## Maltose monohydrate-d<sub>14</sub>

|                           |  |
|---------------------------|--|
| <b>Cat. No.:</b>          | HY-N2024AS   |
| <b>Molecular Formula:</b> | C <sub>12</sub> H <sub>10</sub> D <sub>14</sub> O <sub>12</sub>  |
| <b>Molecular Weight:</b>  | 374.4  |
| <b>Target:</b>            | Endogenous Metabolite; Isotope-Labeled Compounds   |
| <b>Pathway:</b>           | Metabolic Enzyme/Protease; Others  |
| <b>Storage:</b>           | -20°C, sealed storage, away from moisture<br>* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture) |



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 100 mg/mL (267.09 mM; Need ultrasonic and warming)

| Concentration | Mass      |            |            |
|---------------|-----------|------------|------------|
|               | 1 mg      | 5 mg       | 10 mg      |
| 1 mM          | 2.6709 mL | 13.3547 mL | 26.7094 mL |
| 5 mM          | 0.5342 mL | 2.6709 mL  | 5.3419 mL  |
| 10 mM         | 0.2671 mL | 1.3355 mL  | 2.6709 mL  |

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Maltose monohydrate-d<sub>14</sub> is the deuterium labeled Maltose monohydrate. Maltose monohydrate is the energy source for bacte[1][2].

#### In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.
- [2]. Namavari M, et al. Synthesis of [<sup>18</sup>F]-labelled maltose derivatives as PET tracers for imaging bacterial infection. *Mol Imaging Biol*. 2015 Apr;17(2):168-76.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA