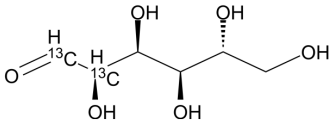
D-Glucose-$^{13}C_2$-4

Cat. No.:	HY-B0389S15
CAS No.:	138079-87-5
Molecular Formula:	$C_4{}^{13}C_2H_{12}O_6$
Molecular Weight:	182.14
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 30 mg/mL (164.71 mM)
DMF : ≥ 20 mg/mL (109.81 mM)
PBS (pH 7.2) : ≥ 10 mg/mL (54.90 mM)
Ethanol : ≥ 0.3 mg/mL (1.65 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.4903 mL	27.4514 mL	54.9028 mL
5 mM	1.0981 mL	5.4903 mL	10.9806 mL
10 mM	0.5490 mL	2.7451 mL	5.4903 mL

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

BIOLOGICAL ACTIVITY

Description

D-Glucose-$^{13}C_2$-4 is the ^{13}C labeled D-Glucose. D-Glucose (Glucose), a monosaccharide, is an important carbohydrate in biology. D-Glucose is a carbohydrate sweetener and critical components of the general metabolism, and serve as critical signaling molecules in relation to both cellular metabolic status and biotic and abiotic stress response[1].

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[1].
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;53(2):211-216.

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