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## Product Data Sheet

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Product Name: L-Glutamic acid-1-13C

Cat. No.: GC68020

### Chemical Properties

Cas. No. 81201-99-2

Formula  $C_4^{13}CH_9NO_4$  M.Wt 148.12

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

L-Glutamic acid-1-13C is the 13C-labeled L-Glutamic acid. L-Glutamic acid acts as an excitatory transmitter and an agonist at all subtypes of glutamate receptors (metabotropic, kainate, NMDA, and AMPA). L-Glutamic acid shows a direct activating effect on the release of **DA** from dopaminergic terminals.

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>.

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.

[2]. Giorguieff MF, et al. Presynaptic effect of L-glutamic acid on the release of dopamine in rat striatal slices. *Neurosci Lett.* 1977 Oct;6(1):73-7.

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

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