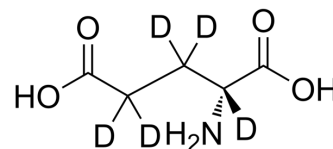


## D-Glutamic acid-d<sub>5</sub>

<b>Cat. No.:</b>	HY-100805S		
<b>CAS No.:</b>	14341-88-9		
<b>Molecular Formula:</b>	C <sub>5</sub> H <sub>4</sub> D <sub>5</sub> NO <sub>4</sub>		
<b>Molecular Weight:</b>	152.16		
<b>Target:</b>	Endogenous Metabolite; Isotope-Labeled Compounds		
<b>Pathway:</b>	Metabolic Enzyme/Protease; Others		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 50 mg/mL (328.60 mM; Need ultrasonic)

DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	6.5720 mL	32.8601 mL	65.7203 mL
	5 mM	1.3144 mL	6.5720 mL	13.1441 mL
	10 mM	0.6572 mL	3.2860 mL	6.5720 mL

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

### BIOLOGICAL ACTIVITY

#### Description

D-Glutamic acid-d<sub>5</sub> is the deuterium labeled D-Glutamic acid. D-glutamic acid, an enantiomer of L- glutamic acid, is widely used in pharmaceuticals and foods<sup>[1]</sup>.

#### 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;53(2):211-216.

[2]. Han H, et al. Changes in D-aspartic acid and D-glutamic acid levels in the tissues and physiological fluids of mice with various D-aspartate oxidase activities. *J Pharm*

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Biomed Anal. 2015 Dec 10;116:47-52.

[3]. Chung SY, et al. IgE binding to peanut allergens is inhibited by combined D-aspartic and D-glutamic acids. Food Chem. 2015 Jan 1;166:248-53.

[4]. Wilson W, et al. The metabolism of D- and L- glutamic acid in the rat. J Biol Chem. 1961 Feb;236:365-9.

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

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