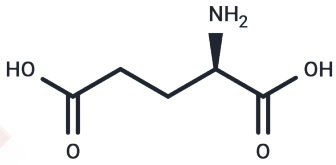
# Data Sheet (Cat.No.T10935)

TargetMol

## D-Glutamic acid

### Chemical Properties



CAS No. : 6893-26-1

Formula: C5H9NO4

Molecular Weight: 147.13

Storage: Keep away from direct sunlight,Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

| | |
|---|---|
| Description | D-Glutamic acid ((R)-Glutamic acid), the enantiomer of L-glutamic acid, is widely used in medicine and food. |
| Targets(IC50) | Endogenous Metabolite |
| In vitro | Various d-amino acids, such as D-serine, D-aspartic acid (D-Asp), and D-glutamic acid (D-Glu), are widely found in mammals, including humans, and are considered candidate new physiologically active substances and/or biomarkers. D-[Asp/Glu] (4 mg/mL) inhibited the binding of IgE to peanuts (75%), while D-Glu and D-Asp had no inhibitory effect. IgE is specific to D-[Asp/Glu] and may have the potential to remove IgE or reduce its binding to peanut allergens. |
| In vivo | At present, D-glutamic acid is receiving attention as a regulator of neuronal transmission and hormone secretion. It is only metabolized by D-aspartate oxidase in mammals. After intraperitoneal injection, L-glutamic acid is catabolized by α-ketoglutarate, and D-glutamic acid is converted to n-pyrrolidone carboxylic acid. The carbon 2 of D- and L-glutamic acid is converted to methyl acetate in the cecum. Both rat liver and kidney catalyze the conversion of D-glutamic acid to n-pyrrolidone carboxylic acid. |

### Solubility Information

| | |
|---|---|
| Solubility | H2O: 6.94 mg/mL (47.17 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 6.7967 mL | 33.9836 mL | 67.9671 mL |
| 5 mM | 1.3593 mL | 6.7967 mL | 13.5934 mL |
| 10 mM | 0.6797 mL | 3.3984 mL | 6.7967 mL |
| 50 mM | 0.1359 mL | 0.6797 mL | 1.3593 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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 Biomed Anal. 2015 Dec 10;116:47-52.
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.
Wilson W, et al. The metabolism of D- and L- glutamic acid in the rat. J Biol Chem. 1961 Feb;236:365-9.