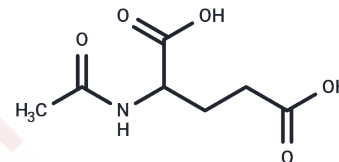


N-Acetyl-L-glutamic acid

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 1188-37-0 |
| Formula: | C7H11NO5 |
| Molecular Weight: | 189.17 |
| Storage: | 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 | N-Acetyl-L-glutamic acid (Ac-L-Glu-OH) (NACGlu) is an acetylated amino acid. NACGlu is biosynthesized from glutamic acid and acetyl-CoA by the enzyme N-acetyl glutamate synthase (NAGS). NACGlu activates carbamoyl phosphate synthetase in the urea cycle. A deficiency in N-acetyl glutamate synthase or a genetic mutation in the gene coding for the enzyme will lead to urea cycle failure in which ammonia is not converted to urea, but rather accumulated in the blood leading to the condition called Type I hyperammonemia. |
| Targets(IC50) | Endogenous Metabolite |

Solubility Information

| | |
|---------------------|---|
| Solubility | H2O: 25 mg/mL (132.16 mM),Sonication is recommended. DMSO: 250 mg/mL (1321.56 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+90% Saline: 10 mg/mL (52.86 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (10.57 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 5.2863 mL | 26.4313 mL | 52.8625 mL |
| 5 mM | 1.0573 mL | 5.2863 mL | 10.5725 mL |
| 10 mM | 0.5286 mL | 2.6431 mL | 5.2863 mL |
| 50 mM | 0.1057 mL | 0.5286 mL | 1.0573 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

Tavazzi B, et al. Simultaneous high performance liquid chromatographic separation of purines, pyrimidines, N-acetylated amino acids, and dicarboxylic acids for the chemical diagnosis of inborn errors of metabolism. Clin Biochem. 2005 Nov;38(11):997-1008.

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