

Product data sheet



MedKoo Cat#: 59494 Name: L-Butyrine CAS: 1492-24-6 Chemical Formula: C ₄ H ₉ NO ₂ Exact Mass: 103.0633 Molecular Weight: 103.121		
Product supplied as:		Powder
Purity (by HPLC):		≥ 98%
Shipping conditions		Ambient temperature
Storage conditions:		Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

L-Butyrine is a member of the class of compounds known as L-alpha-amino acids. L-alpha-Amino acids are alpha amino acids which have the L-configuration of the alpha-carbon atom. L-alpha-aminobutyric acid is soluble (in water) and is a moderately acidic compound (based on its pKa). L-alpha-Aminobutyric acid is a non-proteogenic amino acid that can be found in the human kidney, in liver tissues, and in most biofluids or excreta (e.g. feces, breast milk, urine, and blood). Within the cell, L-alpha-aminobutyric acid is primarily located in the cytoplasm. alpha-Aminobutyric acid is biosynthesized by transaminating oxobutyrate, a metabolite in isoleucine biosynthesis. As a non-proteogenic amino acid, alpha-aminobutyric acid can be used by nonribosomal peptide synthases. One example of a nonribosomal peptide containing alpha-aminobutyric acid is ophthalmic acid, which was first isolated from calf lens. alpha-Aminobutyric acid is a non-essential amino acid that is primarily derived from the catabolism of methionine, threonine, and serine. High protein diets can result in significantly higher alpha-aminobutyrate levels in plasma (PMID: 26227325). alpha-Aminobutyric acid is elevated in the plasma of children with Reye's syndrome, tyrosinemia, homocystinuria, nonketotic hyperglycinemia, and ornithine transcarbamylase deficiency (PMID: 420125). alpha-Aminobutyric acid is one of the three isomers of aminobutyric acid. The two other are the neurotransmitter gamma-aminobutyric acid (GABA) and beta-aminobutyric acid (BABA) which is known for inducing plant disease resistance.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
Water	110.0	1,066.71

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	9.70 mL	48.49 mL	96.97 mL
5 mM	1.94 mL	9.70 mL	19.39 mL
10 mM	0.97 mL	4.85 mL	9.70 mL
50 mM	0.19 mL	0.97 mL	1.94 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

TBD

In vivo study

TBD

7. Bioactivity

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Biological target:

H-Abu-OH, one of the three isomers of aminobutyric acid, is elevated in the plasma of children with with Reye's syndrome, tyrosinemia, homocystinuria, nonketotic hyperglycinemia, and ornithine transcarbamylase deficiency.

In vitro activity

TBD

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.