

Product data sheet



MedKoo Cat#: 620106 Name: L-allo-Isoleucine CAS: 1509-34-8 Chemical Formula: C ₆ H ₁₃ NO ₂ Exact Mass: 131.0946 Molecular Weight: 131.175	
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-allo-Isoleucine may be used in studies on maple syrup urine disease (MSUD). In patients with classical MSUD (n = 7), alloseucine was beyond the cutoff value in 2451 of 2453 unselected samples. In patients with variant MSUD (n = 9), alloseucine was >5 micromol/L in all samples taken for establishment of diagnosis and in 94% of the samples taken for treatment control (n = 624). With the other branched-chain amino acids, the frequency of diagnostically significant increases was <45%. The plasma L-alloseucine above the cutoff value of 5 micromol/L is the most specific and most sensitive diagnostic marker for all forms of MSUD.

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
PBS (pH 7.2)	1.0	7.62
Water	10.0	76.24

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	7.62 mL	38.12 mL	76.24 mL
5 mM	1.52 mL	7.62 mL	15.25 mL
10 mM	0.76 mL	3.81 mL	7.62 mL
50 mM	0.15 mL	0.76 mL	1.52 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

1. Ao Y, Duan A, Chen B, Yu X, Wu Y, Zhang X, Li S. Integration of an Expression Platform in the SELEX Cycle to Select DNA Aptamer Binding to a Disease Biomarker. ACS Omega. 2022 Mar 17;7(12):10804-10811. doi: 10.1021/acsomega.2c00769. PMID: 35382297; PMCID: PMC8973154.

In vivo study

TBD

7. Bioactivity

Biological target:

L-Alloseucine is a branched chain amino acid and is a stereo-isomer of L-isoleucine.

In vitro activity

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This study used the Maple syrup urine disease (MSUD) biomarker L-allo-isoleucine to test the selection model. After five rounds of screening, the cleavage products were sufficiently enriched to be visualized on polyacrylamide gel electrophoresis (PAGE) gel. Through high-throughput sequencing analysis, several candidates were identified. One such candidate, IR3-I-DNA, binds L-allo-isoleucine with a dissociation constant (K_D) of 0.57 mM.

Reference: ACS Omega. 2022 Mar 17;7(12):10804-10811. <https://pubmed.ncbi.nlm.nih.gov/35382297/>

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.