

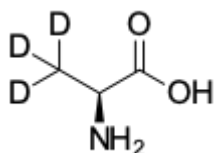
L-Alanine-d3

<http://www.lumiprobe.com/p/l-alanine-d3>

L-Alanine-d3 is the deuterium-labeled L-alanine and is intended for use as an analytical reference standard in LC-MS/MS.

Alanine is one of the principal amino acid substrates for hepatic gluconeogenesis and ureagenesis. Alanine is produced in peripheral tissues in transamination processes with glutamate, branched-chain amino acids, and other amino acids; following its release in the systemic circulation, alanine is predominantly taken up by the liver and to a lesser extent by the kidney. High alanine levels (hyperalaninemia) could be a marker for liver disease, diabetes mellitus, muscle breakdown, or genetic disorders like pyruvate dehydrogenase deficiency and alanine-glyoxylate aminotransferase 2 (AGXT2) deficiency. Low level of alanine (hypoalaninemia) could be marker of hypoglycemia or ketoacidosis.

Quantification of this important metabolite and biomarker in dried blood samples can be performed most efficiently by LC-MS/MS using Alanine-d3 as a standard.



Structure of L-Alanine-d3

General properties

Appearance: white solid

Molecular weight: 92.11

Molecular formula: C₃H₄D₃NO₂

Solubility: in water

Quality control: NMR ¹H and HPLC-MS (95+ %, D: 98+ %)

Storage conditions: 24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.

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