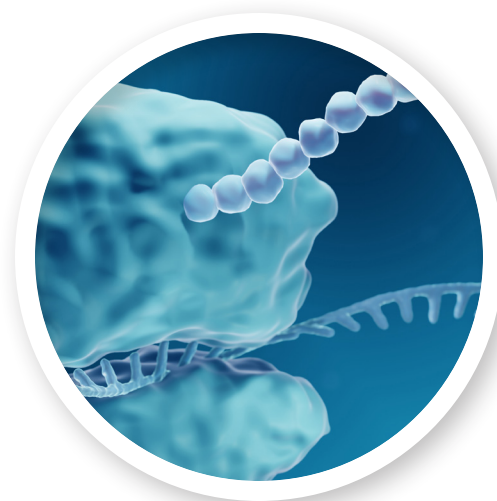




# Branched-Chain Amino Acid Mixes

**New!**



Branched-chain amino acids (BCAAs) have fundamental roles in various bioprocesses. They are, for example, involved in protein synthesis and serve a variety of cellular/metabolic functions (e.g., immunity, growth). Component wise, BCAAs comprise three essential amino acids (isoleucine, leucine, and valine) and the isoleucine derivative – alloisoleucine. These metabolites have also been implicated in chronic diseases and metabolic disorders.

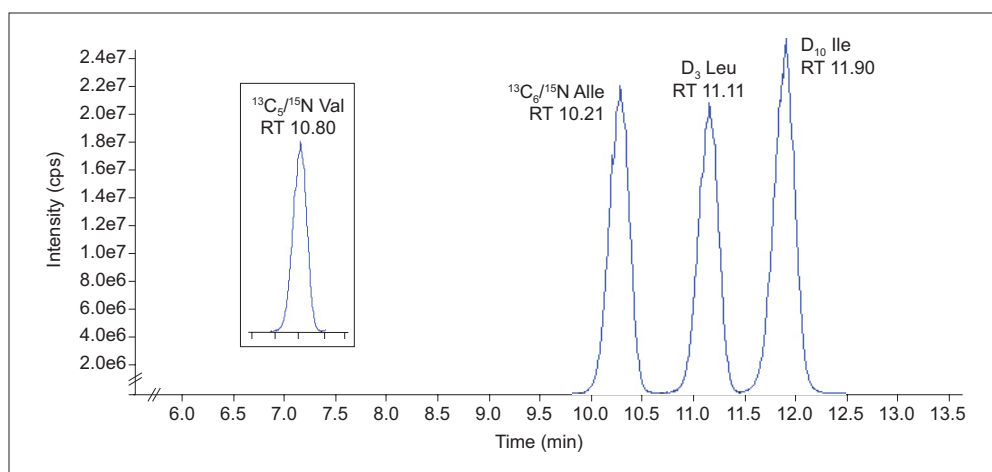
**To aid research development and application, Cambridge Isotope Laboratories, Inc. (CIL) has formulated branched-chain amino acid standard mixtures.** These mixes are available dried down in their stable isotope-labeled and unlabeled form for use in MS-based quality control and qualification/quantification exercises.

Catalog No.	Description
NSK-BCAA	Branched-chain Amino Acid Standard Mix
NSK-BCAA-US	Branched-chain Amino Acid Standard Mix (unlabeled)

**Table.** Composition of the isotopically labeled BCAA mixtures. Reconstituting in 1 mL of solvent (e.g., water, 0.1 M HCl) will provide an equimolar concentration of 400  $\mu$ M.

Description	Abbrev.	Label and Enrichment	Q1 m/z
L-Allo-isoleucine	Alle	$^{13}\text{C}_6$ , 97-99%; $^{15}\text{N}$ , 97-99%	139.2
L-Isoleucine	Ile	$\text{D}_{10}$ , 98%	142.2
L-Leucine	Leu	5,5,5- $\text{D}_3$ , 99%	135.2
L-Valine	Val	$^{13}\text{C}_5$ , 99%; $^{15}\text{N}$ , 99%	124.1

**Note:** Compounds can also be obtained individually; please inquire.



**Figure.** Representative XICs of the BCAA mix metabolites measured by RPLC-MRM/MS (ESI+, 5500+ QqQ). Separation of the isobaric metabolites is shown in the main plot, with Val in the inset. Displayed are the  $[\text{M}+\text{H}]^+$  ions (see Table for precursor values).

Chemical purity (CP) is 98% or greater, unless otherwise indicated.

For research use only. Not for use in diagnostic procedures.

**Cambridge Isotope Laboratories, Inc.**

North America: 1.800.322.1174 | cilsales@isotope.com | International: +1.978.749.8000 | intlsales@isotope.com | fax: 1.978.749.2768 | isotope.com