



Feed for SILAM

Stable Isotope Labeling in Mammals



Custom feeds can be prepared upon request.



The study of animal models of disease provides useful insight into human disease. The SILAM technique allows the global, relative quantitative analysis of mammalian disease models through case-control analyses. In traditional SILAM, rodents are fed either an isotope-rich or isotope-deficient diet for a period of time (tissue-specific due to turnover rates) before LC-MS analysis of the harvested tissue(s) of interest.

Cambridge Isotope Laboratories, Inc. (CIL) is pleased to offer labeled/unlabeled feeds (see tables below) for metabolic incorporation of stable isotope-enriched or natural amino acids into mice (or rats) for use in SILAM-based MS studies.

Mouse Express® L-Lysine

Catalog No.	Description
MF-LYS-C	Mouse Express L-Lysine (¹³ C ₆ , 99%) Mouse Feed*
MLK-LYS-C	Mouse Express L-Lysine (¹³ C ₆ , 99%) Mouse Feed Kit
MF-LYS-C-IR	Mouse Express L-Lysine (¹³ C ₆ , 99%) Irradiated Mouse Feed*
MLK-LYS-C-IR	Mouse Express L-Lysine (¹³ C ₆ , 99%) Irradiated Mouse Feed Kit

*Unlabeled Mouse Express mouse feed (MF-UNLABELED) is also available.
Note: These kits contain 1 kg of ¹³C-labeled (99%) and unlabeled L-lysine feed.

Mouse Express® L-Lysine NeuCode™

Catalog No.	Description
MF-LYS-NEU2-1WK	Mouse Express L-Lysine 2-plex NeuCode Mouse Feed
MF-LYS-NEU2-3WK	Mouse Express L-Lysine 2-plex NeuCode Mouse Feed

Please inquire if alternative formulations are required with other amino acids and labeling patterns.

NeuCode™ is a trademark of WARF.
Mouse Express is a registered trademark of Cambridge Isotope Laboratories, Inc.

Mouse Express® L-Leucine

Catalog No.	Description
MF-LEU-D3	Mouse Express L-Leucine (5,5,5-D ₃ , 99%) Mouse Feed*
MLK-LEU-D3	Mouse Express L-Leucine (5,5,5-D ₃ , 99%) Mouse Feed Kit
MF-LEU-D3-IR	Mouse Express L-Leucine (5,5,5-D ₃ , 99%) Irradiated Mouse Feed*
MLK-LEU-D3-IR	Mouse Express L-Leucine (5,5,5-D ₃ , 99%) Irradiated Mouse Feed Kit

*Unlabeled Mouse Express mouse feed (MF-UNLABELED) is also available.
Note: These kits contain 1 kg of D₃-labeled (99%) and unlabeled L-leucine feed.

Spirulina and Mouse Express®

Catalog No.	Description
CLM-8400	Spirulina Whole Cells (U- ¹³ C, 97%)
NLM-8401	Spirulina Whole Cells (U- ¹⁵ N, 98%)
ULM-8453	Spirulina Whole Cells (unlabeled)
MF-Spirulina-N	Mouse Express Spirulina (¹⁵ N, 98%) Mouse Feed
MF-Spirulina-U	Mouse Express Spirulina (unlabeled) Mouse Feed
MLK-Spirulina-N	Mouse Express Spirulina (¹⁵ N, 98%) Mouse Feed Kit
MF-Spirulina-N-IR	Mouse Express Spirulina (¹⁵ N, 98%) Irradiated Mouse Feed
MF-Spirulina-U-IR	Mouse Express Spirulina (unlabeled) Irradiated Mouse Feed
MLK-Spirulina-N-IR	Mouse Express Spirulina (¹⁵ N, 98%) Irradiated Mouse Feed Kit

Note: The kits contain 1 kg of ¹⁵N-labeled (98%) and unlabeled spirulina feed.

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Other Products of Interest

Methionine (Met) Surrogates

L-Azidohomoalanine-HCl (light, AHA; heavy, hAHA) and L-azidonorleucine-HCl (ANL) can be used to evaluate the synthesis and turnover of newly synthesized proteins *in vivo* through targeted or untargeted MS analysis (e.g., Yates JR et al. JPR 2015). For immediate use in SILAM experiments, CIL offers a collection of Mouse Express mouse feeds (see table below). Please inquire for pricing.

Catalog No.	Description
MF-AHA	Mouse Express AHA Mouse Feed (contains 2 g of AHA per kg of mouse feed)
MF-HAHA	Mouse Express hAHA Mouse Feed (contains 2 g of hAHA per kg of mouse feed)
MF-UNLABELED-MET	Mouse Express Mouse Feed (unlabeled) (contains 2 g of L-Met per kg of mouse feed)
MLK-HAHA-KIT	Mouse Express hAHA Mouse Feed Kit (contains 1 kg each of hAHA, AHA, and unlabeled Met feed)
MF-ANL	Mouse Express ANL Mouse Feed (unlabeled) (contains 20 g ANL per kg of mouse feed)
MF-ANL-NE-CONTROL*	Mouse Express ANL Mouse Feed (unlabeled) (contains 2 g of L-Met per kg of mouse feed)

*Non-essential (NE) amino acids increased proportionally, while keeping other macronutrient sources (e.g., glucose, fat) constant, to compensate for 2% ANL in MF-ANL.

Please visit isotope.com/applications → Proteomics → Metabolic Labeling → SILAM for additional information and complete product listings.

References

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