

MEDIA FOR SPECIAL APPLICATIONS

SILAC DMEM w/o L-Arginine, w/o L-Lysine, w/o L-Glutamine & **SILAC RPMI 1640** w/o L-Arginine, w/o L-Lysine, w/o L-Glutamine

Stable Isotope Labelling with Amino acids in Cell culture (SILAC) is an in vivo labelling method for relative quantization of proteins.

A mass spectrometry-based technique was developed to detect differences in protein abundance between two (or more) samples.

Therefore two populations of cells are cultivated in cell culture with either normal amino acids or the corresponding heavy isotopes.

Proteins from both cell populations can be combined and analyzed by mass spectrometry.

Main applications of SILAC Media are:

- 🌿 Quantitative analysis of relative changes in protein expression
- 🌿 Quantitative analysis of proteins for which no antibodies are available
- 🌿 Protein expression of normal cells compared to disease cells
- 🌿 Identification and quantification of a high number of proteins in a single experiment
- 🌿 Analysis of signalling pathways

Features:

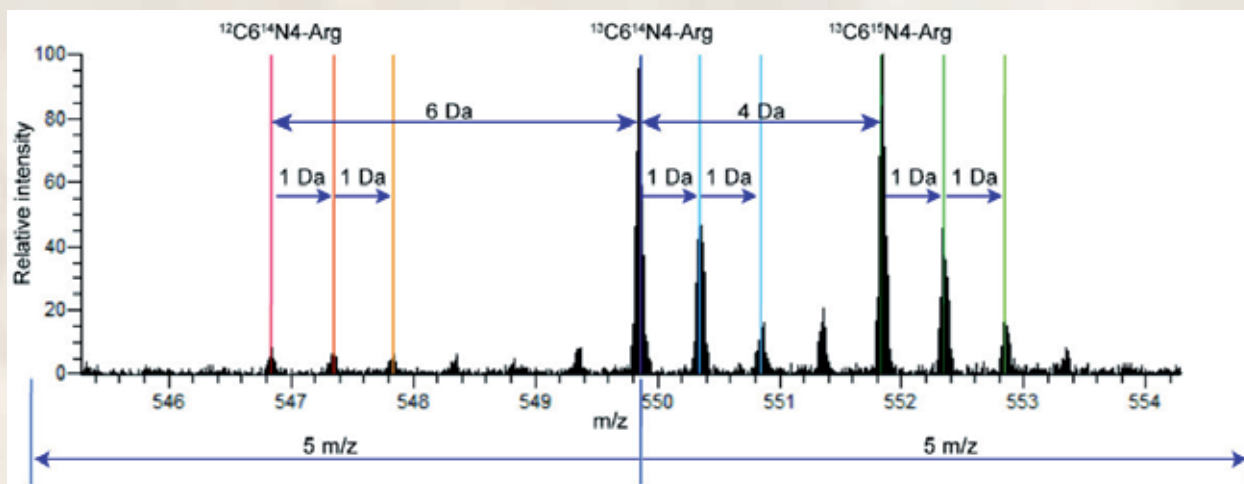
- 🌿 Non radioactive stable isotope labelling
- 🌿 Efficient – 100% label incorporation into proteins of living cells
- 🌿 Reproducible – No intra-experimental variability caused by differential sample preparation
- 🌿 Flexible – Media deficient in both L-lysine and L-arginine, allowing for more complete proteome coverage through dual amino acid isotope labelling

Ordering Information

Code	Description	Volume
ECB7511L	SILAC DMEM w/o L-Arginine, w/o L-Lysine, w/o L-Glutamine	500 ml
ECB9206L	SILAC RPMI1640 w/o L-Arginine, w/o L-Lysine, w/o L-Glutamine	500 ml

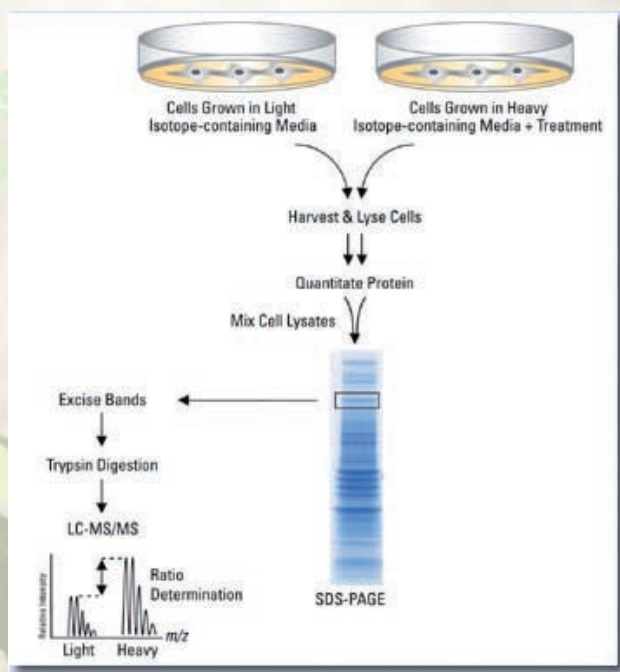
In detail...

Mass spectrometry analysis with SILAC Media:



Comparison between media with light isotopes and media containing heavy isotopes:

- One of the populations is fed with growth medium containing normal amino acids. The growth medium of the second cell population contains amino acids labeled with stable (non-radioactive) heavy isotopes
- When the cells are growing in this medium, they incorporate the heavy arginine/lysine into all of their proteins
- All of the arginine containing peptides are now 6 Da heavier than their normal counterpart
- Since there is hardly any chemical difference between the labelled amino acid and the natural amino acid isotopes, the cells behave exactly like the control cell population grown in the presence of normal amino acid
- Pairs of chemically identical peptides of different stable-isotope composition can be differentiated in a mass spectrometer owing to their mass difference
- The ratio of peak intensities in the mass spectrum for such peptide pairs accurately reflects the abundance ratio for the two proteins



Storage & Stability SILAC DMEM & RPMI1640

Shelf Life: 18 months
Storage: +2°C to +8°C

Product Profile SILAC DMEM

CO₂-Concentration, optimum: 8.5 %
pH: 6.8 – 7.5
Osmolality: 280 – 350 mOsmol/kg
Endotoxin : < 1 EU/ml
Cell Culture: tested
Sterility: tested

Product Profile SILAC RPMI1640

CO₂-Concentration, optimum: 4.5 %
pH: 7.0 – 7.5
Osmolality: 260 – 340 mOsmol/kg
Endotoxin : < 1 EU/ml
Cell Culture: tested
Sterility: tested

EuroClone®

serving science through innovation

EuroClone S.p.A.

Via Figino 20/22 - 20016 Pero (MI) Italy

Customer Service e-mail: info@euroclone.it

Technical Service e-mail: tsa@euroclone.it

Phone+39.02.38195.1 ; Fax +39.02.38101465

www.euroclone.it

EuroClone S.p.A. has a Quality System certified in compliance with UNI EN ISO 9001:2008 and NF EN ISO 13485:2004