

*In vivo*  
**Proteomics of Mice**

**$^{13}\text{C}$ -Lys-SILAC Mice Tissue**

# Stable Isotopic $^{13}\text{C}$ -Lys-Labeled Mice Tissue

Silantes GmbH provides metabolically labeled mice tissue using the labeled mice diets produced and developed in-house.

Labeled mice tissue is useful as standards for quantification of proteomic data. Fig. 1 shows the work flow.

In order to quantify differences in protein patterns of mice tissue A with respect to mice tissue B, the isotopically labeled mice tissue R is mixed with A and B. The proteomes of sample A mixed with R (in a 1:1 ratio) and B mixed with R (in 1:1 ratio) are isolated, digested and subjected to LC-MS as shown in the work flow (Fig.1). Two ratios are determined: the ratio of peptide amounts stemming from A and R is determined yielding the (A/R)-ratio and the (B/R)-ratio for each peptide. Calculating the ratio (A/R): (B/R) yields the ratio of peptides (A/B).

It is worth mentioning that the strain for R must not necessarily be the same as that used for A and B. The stable isotopically labeled mice tissue (R) is used as a standard, permitting normalising A with respect to B, accounting for differences in the isolation procedure in the culture mixtures (A/R) and (B/R) without affecting the peptide ratios (A/B).

In other words, the customer is free as regards the choice of strain used for the experiment, but can use the Silantes-labeled mice tissue as a reference which is spiked into tissue A and B.

## Mice tissue with the following labels is available:

- $^{13}\text{C}$ , lysine specific labeled (Lys(6)-SILAC)
- $^{15}\text{N}$ , uniform labeled ( $^{15}\text{N}$ -SILAM)

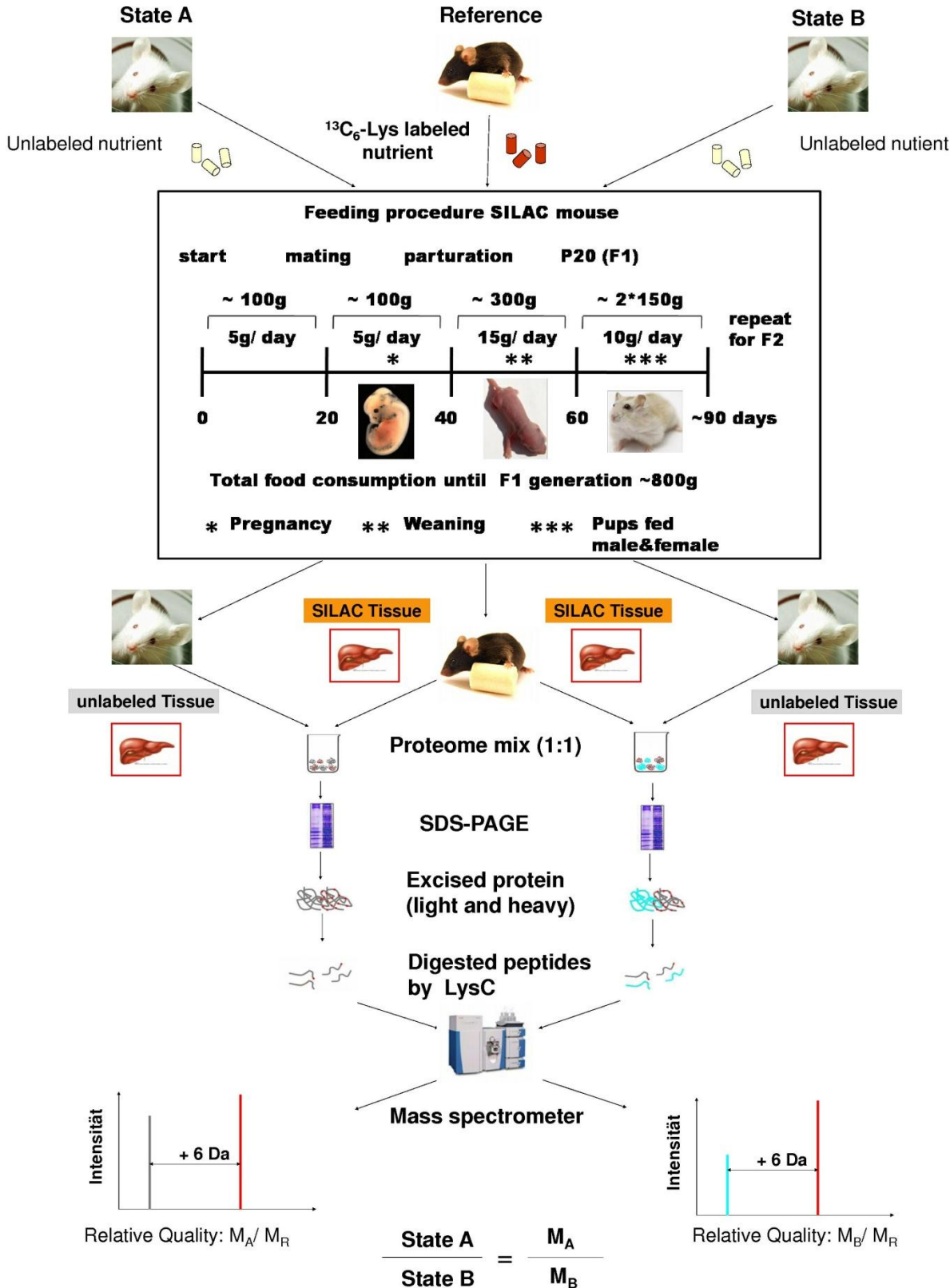
The mice strain (R): C57Bl6; sex: male or female; Generation: >F2, Age: 4-8 weeks, whole organ.

## Notes:

Other labels and other mice strains are available on request.

Also  $^{13}\text{C}$ -Lys-labelled mice, C57BL6, are available as reference (R).

# Proteomic Workflow



## SILAC Tissue

Product Number	Organ	Enrichment in <sup>13</sup> C-Lys	Size in mg (approx.)
252923919	Lung, whole organ	>97%	140
252923819	lung, cut organ	>97%	80
252924100	Liver, whole organ	>97%	800
252924000	Liver, cut organ	>97%	250
252923900	Liver, cut organ	>97%	100
252923902	Brain, whole organ	>97%	400
252923903	Kidney, whole organ	>97%	180
252923904	Spleen, whole organ	>97%	70
252923908	Muscle	>97%	50
252923901	Heart, whole organ	>97%	100
252923915	Testis (1x)	>97%	70
252923923	Testis (2x), whole organ	>97%	140
252923921	Bladder, whole organ	>97%	25
252923922	Thymus, whole organ	>97%	45
252923914	Adipotic tissue, white	>97%	200
252923914	Adipotic tissue, brown	>97%	200
252923905	Plasma	>97%	50
252923913	Serum	>97%	50
<b>On request</b>			
252923906	Skin	>97%	300
252923910	Eye	>97%	20
252923911	Breast tissue	>97%	150
252923916	Stomach	>97%	200
252923920	Intestine without content	>97%	800

### Remarks

- Tissue is delivered as whole organs.
- Lung and liver can be provided also as cut tissue as indicated.
- The weight of the organs can vary as indicated.
- The price of the organs is calculated pro rata of the weight as indicated on the price list.
- Other organs and special preparation of tissue is possible on request for additional fee.

### Specification of the mouse tissue

- Strain: C57BL6
- <sup>13</sup>C-Lys labeled for at least 2 generations (F2)

### Preparation of Tissue:

- Sacrification of mice by cervical dislocation;
- Collection of organs within 5 min after sacrifice;
- Perfusion of tissue with cold 1xPBS via cardiac perfusion;
- Freezing of tissue in liquid nitrogen;
- Storage of organs in dry ice.

### SILAM Tissue on request

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