

Functional characterization of the solute carrier LAT-1 (SLC7A5/SLC2A3) in human brain capillary endothelial cells with rapid UPLC-MS/MS quantification of intracellular isotopically labelled L-leucine

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Supplementary material

Table S1: Calibration curves of the validation batches, calculated with linear regression and $1/x^2$ weighting.

Validation batch	R ²	Equation
#1	0.9980	$y = 0.01740 x + 0.00011$
#2	0.9948	$y = 0.01765 x + 0.00021$
#3	0.9956	$y = 0.01630 x + 0.00037$

Table S2: Accuracy and precision data for the 24 h autosampler stability determination.

QC level	Accuracy [%]	Precision [% CV]
Low QC	100.3	7.87
Mid QC	107.0	1.02
High QC	98.8	8.94

N = 3 replicates at each QC concentration.

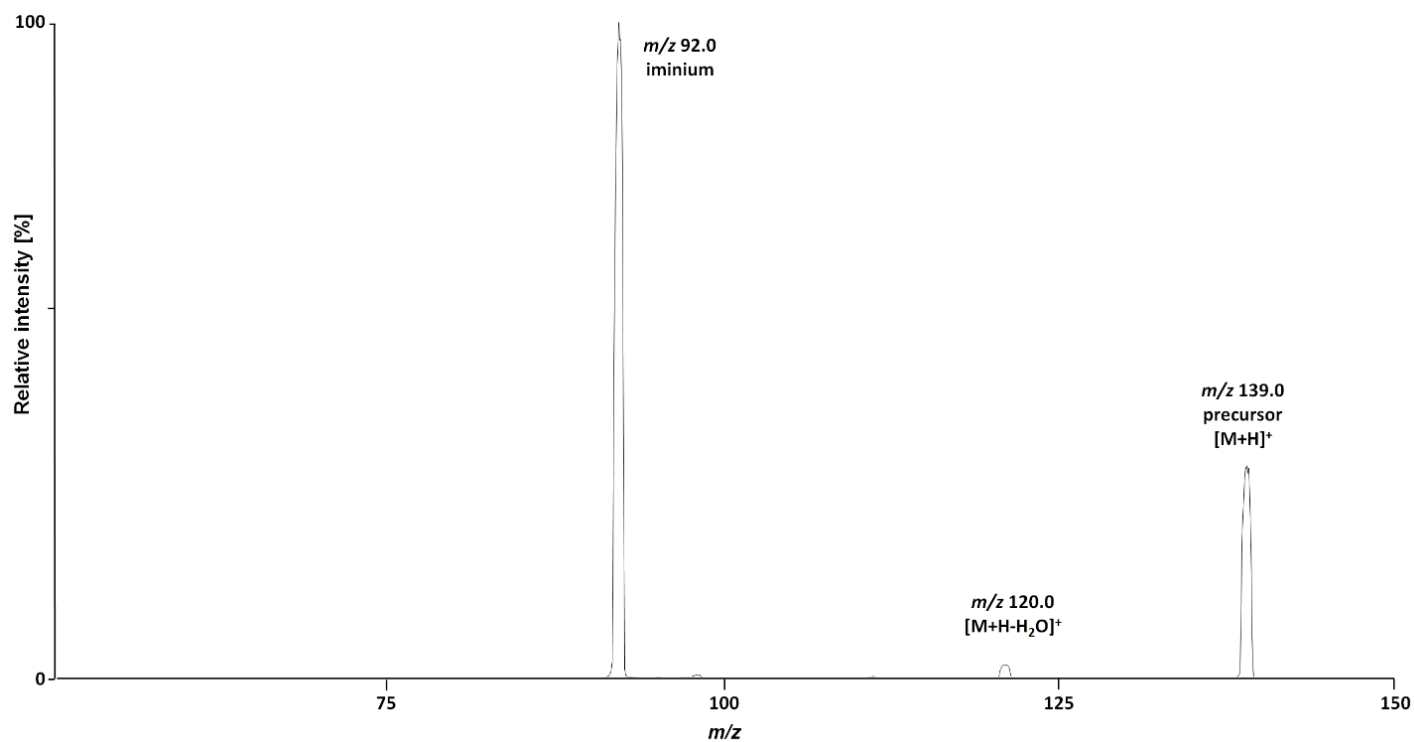


Figure S1. Product ion spectrum of [¹³C₆, ¹⁵N]-L-leucine at the optimal collision energy of 16 V for the second observed product ion at *m/z* 120.0. However, the iminium ion fragment is still substantially more intense, demonstrating its superior sensitivity for selected reaction monitoring.

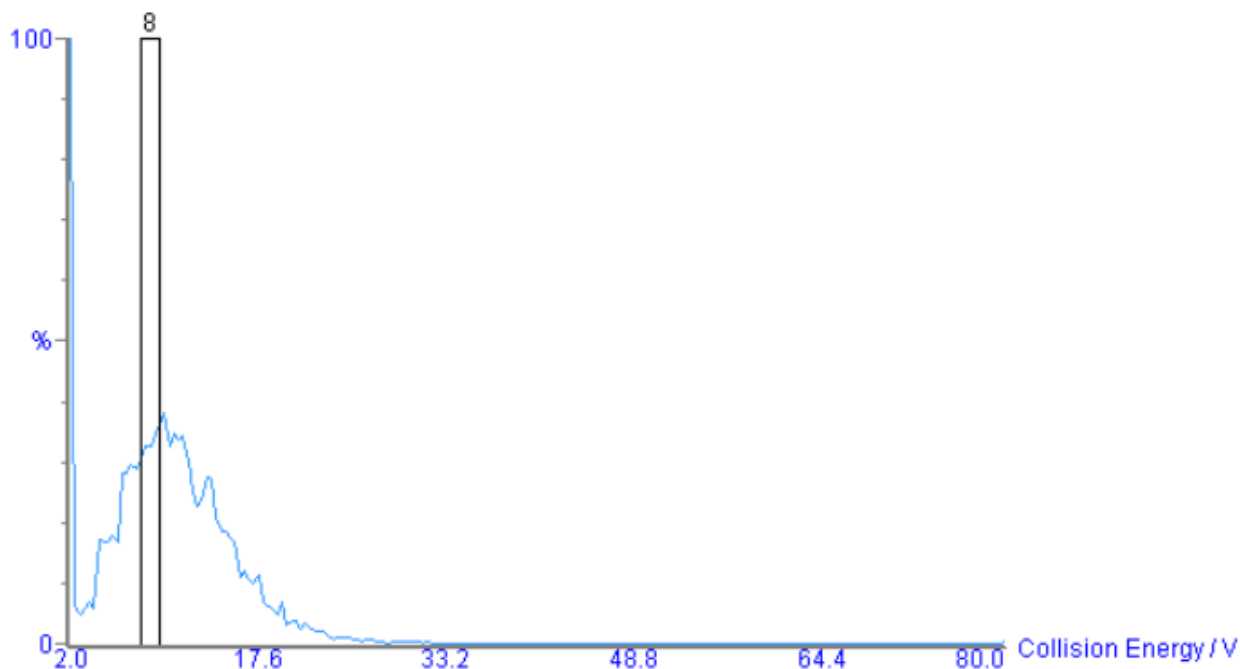


Figure S2. Optimization of the collision energy for the monitoring of the product iminium ion. The highest intensity for the corresponding transition of m/z 139.0 \rightarrow 92.0 was achieved at a collision energy of 9 V.

Compound name: LLC-7
 Correlation coefficient: $r = 0.997810$, $r^2 = 0.995624$
 Calibration curve: $0.0163008 \cdot x + 0.000365483$
 Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
 Curve type: Linear, Origin: Exclude, Weighting: $1/x^2$, Axis trans: None

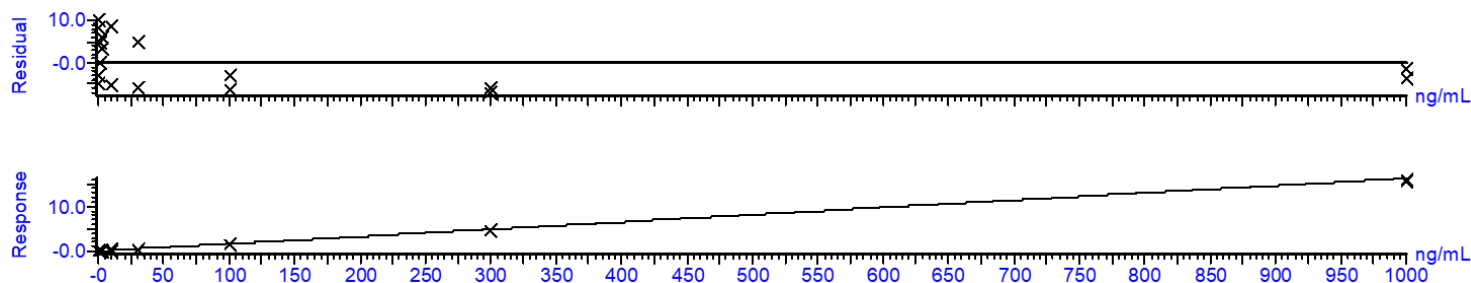


Figure S3. Exemplary calibration curve with residuals of validation batch #3.