

Supplemental Material for "A Robust and Cost-Effective Method for the Production of Val, Leu, Ile ($\delta 1$) Methyl-Protonated ^{15}N -, ^{13}C -, ^2H -Labeled Protein" by Goto et al.

Amino Acid	α -Ketoisovalerate (mg/L)		
	50	75	100
Ala	10 \pm 19	3 \pm 9	1 \pm 8
Asx	2 \pm 7	-1 \pm 6	-1 \pm 5
Glx	2 \pm 2	1 \pm 1	1 \pm 2
Ile	93 \pm 1	91 \pm 1	89 \pm 0
Leu	81 \pm 1	88 \pm 1	90 \pm 0
Lys	-5 \pm 6	-3 \pm 5	-4 \pm 5
Met	0	-1	-8
Phe	3 \pm 5	3 \pm 5	2 \pm 5
Pro	-4 \pm 5	-4 \pm 5	-5 \pm 5
Ser	-1 \pm 4	-1 \pm 8	-3 \pm 11
Thr	2 \pm 8	1 \pm 7	1 \pm 9
Tyr	3 \pm 3	1 \pm 3	-1 \pm 1
Val	79 \pm 1	86 \pm 2	89 \pm 1

Table 1: GC-MS results showing percent incorporation of ^{12}C into ^{15}N , ^{13}C , ^1H MBP-derived amino acids as a function of ^{12}C α -ketoisovalerate concentration. MBP was produced using a $^1\text{H}_2\text{O}/^{13}\text{C}, ^1\text{H}$ glucose, $^{15}\text{NH}_4\text{Cl}$ media supplemented with 50 mg/L ^{12}C α -ketobutyrate and either 50, 75 or 100 mg/L ^{12}C α -ketoisovalerate 1 hour prior to induction, as described in the text. Calculations are described in the legend of Figure 2c.