Supplementary Table 1. Half-life of coenzymes in exponentially growing cells

	E. coli	*B. subtilis*	*S. cerevisiae*
Doubling time (min)	58.7 ± 0.5	73.4 ± 0.4	160.3 ± 6.8
Compound	T_{50} in minutes* [fitting-model]		
PLP	54.2 ± 1.8 [E]	55.4 ± 2 [E]	Supp.
FMN	56.2 ± 2.8 [W]	55.6 ± 3 [W]	176.1 ± 40.3 [W]
FAD	40 ± 2.2 [E]	57 ± 1.8 [E]	110.4 ± 7.8 [W]
CoA	29.9 ± 1.2 [E]	57.2 ± 2.4 [E]	Supp.
CoA w/o salvage	57.1 ± 3 [E]	NQ	Supp.
PAP in CoA	32.6 ± 1.6 [E]	NQ	Supp.
Pantetheine in CoA	60.2 ± 3.3 [E]	NQ	Supp.
NAD	28.3 ± 1 [E]	28.3 ± 0.6 [E]	42 ± 1.9 [E]
NAD w/o salvage	49.5 ± 1.1 [E]	55.2 ± 0.9 [E]	165.6 ± 10.3 [E]
AMP in NAD	30.2 ± 1.2 [E]	35.4 ± 1.5 [E]	45.7 ± 1.9 [E]
NADP	55.2 ± 1.7 [W]	30.1 ± 1.1 [E]	65.5 ± 1.2 [W]
5,10-CH$_2$-H$_4$Pte-Glu$_3$	43.6 ± 1.5 [W]	65.4 ± 3.4 [E]	NQ
10-CHO-H$_4$Pte-Glu$_3$	48 ± 1.7 [W]	86.2 ± 4.4 [W]	NQ
GSH (red)	23.1 ± 1.8 [W]	ND	68.4 ± 2.3 [E]
GSSG (ox)	15.3 ± 0.6 [W]	ND	NQ
Bacillithiol (ox)	ND	5.6 ± 0.1 [E]	ND
ATP	4.7 ± 0.3 [E]	8.6 ± 0.3 [E]	12.6 ± 1.1 [W]
GTP	4.6 ± 0.3 [E]	10.1 ± 0.5 [W]	20.7 ± 1.5 [E]

*Half-life (T_{50}) values are obtained from fitting decaying isotopologue curves of respective coenzymes from dynamic labelling experiments (DLE). Data originates from single DLEs (available in Supplementary Data 1, 4, 5). The indicated fitting models were used: [E] = first order exponential decay; [W] = weibull. The indicated ± s.d. are the calculated from the standard deviations of the obtained parameters from curve fitting; CoA was detected as acetyl-CoA and M2 isotopologue fraction was analysed to correct for acetyl-turnover. Similarly, M1 fraction was analysed for THF derivates to correct for C1-turnover. Where indicated, correction for salvage (CoA, NAD) was applied. Details on calculations, fittings are available in Supplementary Methods. Abbreviations: ND, not detected; NQ, not quantified; Supp., supplemented with precursor.