

Supplementary 4: Minimal medium components required for growth

Comparison of *in silico* substrate requirements with experimentally observed substrate requirements for cell growth. Essential nutrients in the media are highlighted in red colour and non-essential nutrients are highlighted in blue colour.

Media requirements for cell growth					
		Experiment	<i>In silico</i>		
				Experiment	<i>In silico</i>
Amino acids				Cofactors, Ions and others	
Alanine		Blue	Blue		
Arginine		Red	Red	P	Red
Asparagine		Blue	Blue	Folate	Red
Aspartate		Blue	Blue	O ₂	Red
Cysteine		Blue	Blue	Ca	Blue
Glutamate		Blue	Blue	Mg	Blue
Glutamine		Blue	Blue	K	Blue
Glycine		Blue	Blue	Na	Blue
Histidine		Red	Red	Se	Blue
Isoleucine		Red	Red	Vitamins	Blue
Leucine		Red	Red	Fe	Blue
Lysine		Red	Red	Thiamine	Blue
Methionine		Red	Red	glutathione	Blue
Phenylalanine		Red	Red		
Proline		Blue	Blue		
Serine		Blue	Blue	Carbohydrates	
Threonine		Red	Red	Glucose	Blue
Tryptophan		Red	Red		
Tyrosine		Red	Red		
Valine		Red	Red		

^aNutrient media composition were obtained from Yamamoto and Niwa, 1993

^bRed color indicates essential nutrients

^cBlue color indicates non-essential nutrients