Additional file 3. List of the selected superpathways and genes involved in carbon and energy metabolism.

Superpathways (MultiFun Ontology: Metabolism, Child classes)	Subclases (number of genes)	Selected knock out mutant
Carbon utilization (399)	Amines (38) Amino acids (54) Other compounds (1)	
	Fatty acids (31)	fadR (DNA-binding transcriptional dual regulator FadR)
	Carbon compounds (269)	pfkA (6-phosphofructokinase I) pfkB (6-phosphofructokinase II)
Central intermediary metabolism (278)	Sugar nucleotide biosynthesis, conversions (12)	sthA (soluble pyridine nucleotide transhydrogenase)
Energy metabolism, carbón (203)	Aerobic respiration (44)	nuoA (NADH:quinone oxidoreductase subunit A), nuoB (NADH:quinone oxidoreductase subunit B), nuoE (NADH:quinone oxidoreductase subunit E), nuoF (NADH:quinone oxidoreductase subunit F), nuoG (NADH:quinone oxidoreductase subunit G), nuoN (NADH:quinone oxidoreductase subunit N),
	Glycolysis (13)	pgi (glucose-6-phosphate isomerase),
Energy production/transport (96)	Electron acceptors (31)	narG (nitrate reductase A subunit α)
	Electron carriers (15) Electron donors (43)	