type type non-responder NAD-dependent glyceraldehyde-3-phosphate dehydrogenase (EC 1.2.1.12) Phosphoenolpyruvate carboxykinase [ATP] (EC 4.1.1.49) 3 untreated Enolase (EC 4.2.1.11) N-acetylhexosamine 1-kinase Formate—tetrahydrofolate ligase (EC 6.3.4.3)
Glycogen biosynthesis protein GlgD, glucose—1—phosphate adenylyltransferase f...
Endo—1,4—beta—xylanase A precursor (EC 3.2.1.8)
1,4—alpha—glucan (glycogen) branching enzyme, GH—13—type (EC 2.4.1.18)
Glycogen synthase, ADP—glucose transglucosylase (EC 2.4.1.21)
Glucose—6—phosphate isomerase (EC 5.3.1.9)
Phosphoglycerate mutase (EC 5.4.2.1)
Malate dehydrogenase (EC 1.1.1.37)
Acetyl—CoA acetyltransferase (EC 2.3.1.9)
Formyl—coenzyme A transferase (EC 2.8.3.16)
NADP—dependent malic enzyme (EC 1.1.1.40)
Alpha—mannosidase (EC 3.2.1.24)
2—oxoglutarate oxidoreductase, alpha subunit (EC 1.2.7.3) Formate—tetrahydrofolate ligase (EC 6.3.4.3) 2 2-oxoglutarate oxidoreductase, alpha subunit (EC 1.2.7.3) 2-oxoglutarate oxidoreductase, beta subunit (EC 1.2.7.3) rhamnogalacturonan acetylesterase 1,4-alpha-glucan branching enzyme (EC 2.4.1.18) Carbon storage regulator Maltose operon transcriptional repressor MalR, LacI family Oligo–1,6–glucosidase (EC 3.2.1.10)
Lactaldehyde reductase (EC 1.1.1.77)
Altronate hydrolase (EC 4.2.1.7) L-ribulose-5-phosphate 4-epimerase (EC 5.1.3.4)
Peptidoglycan N-acetylglucosamine deacetylase (EC 3.5.1.-) Altronate oxidoreductase (EC 1.1.1.58) Rhamnogalacturonides degradation protein RhiN Methylglyoxal synthase (EC 4.2.3.3) 2-dehydro-3-deoxygluconate kinase (EC 2.7.1.45) 6-phospho-beta-glucosidase (EC 3.2.1.86) Beta-xylosidase (EC 3.2.1.37) Uronate isomerase (EC 5.3.1.12) 2-dehydro-3-deoxyphosphogluconate aldolase (EC 4.1.2.14) Galactose-1-phosphate uridylyltransferase (EC 2.7.7.10) Methylenetetrahydrofolate dehydrogenase (NADP+) (EC 1.5.1.5) Methenyltetrahydrofolate cyclohydrolase (EC 3.5.4.9)
Glucokinase (EC 2.7.1.2)
D-mannonate oxidoreductase (EC 1.1.1.57) Propanediol dehydratase large subunit (EC 4.2.1.28) Melibiose carrier protein, Na+/melibiose symporter
CoA-acylating propionaldehyde dehydrogenase
5-keto-D-gluconate 5-reductase (EC 1.1.1.69)
Hexuronate utilization operon transcriptional repressor ExuR Propanediol dehydratase reactivation factor large subunit Glycerol dehydratase reactivation factor large subunit Biotin carboxyl carrier protein of oxaloacetate decarboxylase Maltodextrin phosphorylase (EC 2.4.1.1)
D-alanine aminotransferase (EC 2.6.1.21)
Acetoin dehydrogenase E1 component beta-subunit (EC 1.2.4.-)
Alpha-amylase (Neopullulanase) SusA (EC 3.2.1.135) SusC, outer membrane protein involved in starch binding L-arabinose-specific 1-epimerase (mutarotase)
Transcriptional repressor of the fructose operon, DeoR family Alpha-amylase (EC 3.2.1.1)
Methylmalonyl-CoA decarboxylase, alpha chain (EC 4.1.1.41) Rhamnulose-1-phosphate aldolase (EC 4.1.2.19) D-lactate dehydrogenase (EC 1.1.1.28) NADH-dependent butanol dehydrogenase A (EC 1.1.1.-) Chloride channel protein Alanine dehydrogenase (EC 1.4.1.1)

Xylose isomerase (EC 5.3.1.5)

Succinyl–CoA ligase [ADP–forming] alpha chain (EC 6.2.1.5) Pyruvate oxidase [ubiquinone, cytochrome] (EC 1.2.2.2)
Acetyl-CoA synthetase (ADP-forming) alpha and beta chains, putative Fucose permease Glycine dehydrogenase [decarboxylating] (glycine cleavage system P protein) (... Succinyl–CoA ligase [ADP–forming] beta chain (EC 6.2.1.5) 2-oxoglutarate dehydrogenase E1 component (EC 1.2.4.2) Chondroitinase (chondroitin lyase)
Dihydrolipoamide dehydrogenase of 2–oxoglutarate dehydrogenase (EC 1.8.1.4)
PrpF protein involved in 2–methylcitrate cycle Fumarate hydratase class I (EC 4.2.1.2) 2-methylisocitrate dehydratase (EC 4.2.1.99) Alpha–glucosidase, family 31 of glycosyl hydrolases, COG1501
Mlc, transcriptional repressor of MaIT (the transcriptional activator of malt...
Oxidoreductase, short chall dehydrogenal design (FO 14.0) Fructose-bisphosphate aldolase, archaeal class I (EC 4.1.2.13) Predicted L-lactate dehydrogenase, Iron-sulfur cluster-binding subunit YkgF Hypothetical oxidoreductase YqhD (EC 1.1.-.-) Alpha–N–acetylglucosaminidase (EC 3.2.1.50) Inositol–1–phosphate synthase (EC 5.5.1.4) N–Acetyl–D–glucosamine permease 2, possible Alpha-glucosidase SusB (EC 3.2.1.20) Glucose–6–phosphate 1–dehydrogenase (EC 1.1.1.49) 6–phosphogluconate dehydrogenase, decarboxylating (EC 1.1.1.44) Fructose-bisphosphate aldolase class I (EC 4.1.2.13) Uncharacterized protein YphG, TPR-domain containing Fumarate hydratase class I, anaerobic (EC 4.2.1.2) SusD, outer membrane protein Ethanolamine utilization protein EutA Transcriptional antiterminator of lichenan operon, BglG family Glyoxylate reductase (EC 1.1.1.79) Regulatory protein SusR
Peptide methionine sulfoxide reductase MsrB (EC 1.8.4.12) Pyruvate dehydrogenase E1 component beta subunit (EC 1.2.4.1) Putative glycogen debranching enzyme, archaeal type, TIGR01561 Dihydrolipoamide acetyltransferase component of pyruvate dehydrogenase comple... Fructoselysine 3-epimerase Two-component sensor histidine kinase, malate (EC 2.7.3.-)
Novel Xylose regulator from Lacl family Predicted alpha-L-rhamnosidase Trehalose–6–phosphate hydrolase (EC 3.2.1.93) Glycerol dehydratase small subunit (EC 4.2.1.30) Propanediol dehydratase small subunit (EC 4.2.1.28) Fructose–6–phosphate phosphoketolase (EC 4.1.2.22) Propanediol utilization polyhedral body protein PduJ Glycerol uptake operon antiterminator regulatory protein Ethanolamine utilization polyhedral–body–like protein EutN Maltose phosphorylase (EC 2.4.1.8)
Trehalose phosphorylase (EC 2.4.1.64) Outer surface protein of unknown function, cellobiose operon L-xylulose/3-keto-L-gulonate kinase (EC 2.7.1.-) Predicted nucleoside ABC transporter, ATP-binding component Putative aldolase Ydjl Transcriptional activator of maltose regulon, MalT Predicted rhamnogalacturonide-specific TRAP-type transporter, small transmemb... CoB-CoM heterodisulfide reductase subunit C (EC 1.8.98.1)
Hypothetical oxidoreductase YdjG (EC 1.-.-.)
Xylose oligosaccharides ABC transporter, ATP-binding protein 2 Phosphoenolpyruvate carboxylase (EC 4.1.1.31)
Beta-phosphoglucomutase (EC 5.4.2.6)
Beta-galactosidase (EC 3.2.1.23), LacA family Xylose ABC transporter, periplasmic xylose–binding protein XylF Propanediol dehydratase medium subunit (EC 4.2.1.28) Cyclomaltodextrin glucanotransferase (EC 2.4.1.19) Glycerol dehydratase medium subunit (EC 4.2.1.30)
Propanediol utilization polyhedral body protein PduN
Beta-galactosidase small subunit (EC 3.2.1.23)
NAD(P)-dependent glyceraldehyde 3-phosphate dehydrogenase archaeal (EC 1.2.1.59)
Glucose oligosaccharide ABC transport system, sugar-binding protein
Xylose oligosaccharides ABC transporter, sugar-binding protein
PTS system, sucrose-specific IIA component (EC 2.7.1.69)
Predicted nucleoside ABC transporter, substrate-binding component Predicted nucleoside ABC transporter, substrate-binding component D1D29 B2D29 B1D29 D2D29 C7D29 C6D29 A5D29