

**Table S2.** Carbon source oxidation patterns (GENIII MicroPlate) of IMCC43444<sup>T</sup>, IMCC44478<sup>T</sup>, *Robiginitalea biformata* KCTC 12146<sup>T</sup>, and *Robiginitalea sediminis* KCTC 52898<sup>T</sup>

Strains: 1, IMCC43444<sup>T</sup>; 2, IMCC44478<sup>T</sup>; 3, *R. biformata* KCTC 12146<sup>T</sup>; 4, *R. sediminis* KCTC 52898<sup>T</sup>.

All data were obtained in this study. +, positive; –, negative.

Oxidation of carbons	1	2	3	4
Dextrin	–	+	+	+
D-Maltose	–	–	–	+
D-Trehalose	+	+	–	+
D-Cellobiose	–	–	–	+
Gentiobiose	+	+	+	+
Sucrose	–	–	–	+
D-Turanose	+	+	+	+
Stachyose	–	–	–	–
D-Raffinose	–	–	–	–
$\alpha$ -D-Lactose	–	–	–	–
D-Melibiose	–	–	–	–
$\beta$ -Methyl-D-glucoside	–	–	–	+
D-Salicin	–	–	–	–
N-Acetyl-D-glucosamine	–	–	–	–
N-Acetyl- $\beta$ -D-mannosamine	–	–	–	–
N-Acetyl-D-galactosamine	–	–	–	–
N-Acetyl neuraminic acid	–	–	–	–
$\alpha$ -D-Glucose	+	+	+	+
D-Mannose	–	–	–	–
D-Fructose	–	–	–	–
D-Galactose	–	–	–	–
3-Methyl-D-glucose	–	–	–	–
D-Fucose	–	–	–	–
L-Fucose	–	–	–	–
L-Rhamnose	–	–	–	–
Inosine	–	–	–	–
D-Sorbitol	–	–	–	–
D-Mannitol	–	–	–	–
D-Arabitol	–	–	–	–
myo-Inositol	–	–	–	–
Glycerol	–	–	–	–

D-Glucose-6-phosphate	—	—	—	—
D-Fructose-6-phosphate	—	+	+	+
D-Aspartic acid	—	—	—	—
D-Serine	—	—	—	—
Gelatin	—	—	—	—
Glycyl-L-proline	—	—	—	—
L-Alanine	—	—	—	—
L-Arginine	—	—	—	—
L-Aspartic acid	—	—	—	—
L-Glutamic acid	—	—	—	—
L-Histidine	—	—	+	—
L-Pyroglutamic acid	—	—	—	—
L-Serine	—	—	—	—
Pectin	—	—	—	—
D-Galacturonic acid	—	—	—	—
L-Galactonic acid lactone	—	—	+	—
D-Gluconic acid	—	—	—	—
D-Glucuronic acid	—	—	+	+
Glucuronamide	+	+	+	+
Mucic acid	—	—	—	—
Quinic acid	—	—	—	—
D-Saccharic acid	—	—	—	—
p-Hydroxyphenylacetic acid	—	—	—	—
Methyl pyruvate	—	—	—	—
D-Lactic acid methyl ester	—	—	—	—
L-Lactic acid	—	—	—	—
Citric acid	—	—	—	—
$\alpha$ -Ketoglutaric acid	+	—	+	+
D-Malic acid	—	—	—	—
L-Malic acid	+	+	+	+
Bromo-succinic acid	+	+	+	+
Tween 40	—	—	—	—
$\gamma$ -Aminobutyric acid	—	—	—	—
$\alpha$ -Hydroxybutyric acid	—	—	—	—
$\beta$ -Hydroxy-D,L-butyric acid	—	—	—	—
$\alpha$ -Ketobutyric acid	—	—	—	—
Acetoacetic acid	+	+	+	+
Propionic acid	—	—	—	—
Acetic acid	—	—	—	—
Formic acid	—	—	—	—

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