

Table S1. Comparison of wild-type and mutant strains obtained by random mutagenesis.

Strain	[2,3-BD] _{max} (g L ⁻¹)	[Glyc] _{cons} (g L ⁻¹)	Y _{2,3-BD/Glyc} (g g ⁻¹)	[Acet] _{max} (g L ⁻¹)	[EtOH] _{max} (g L ⁻¹)
CECT843	20.4 ± 2.1	47.2 ± 2.9	0.43 ± 0.02	1.5 ± 0.4	0.4 ± 0.2
A1	18.0 ± 8.7	38.9 ± 1.5	0.45 ± 0.09	0.9 ± 0.05	0.8 ± 0.5
A2	9.4 ± 2.2	22.5 ± 5.7	0.42 ± 0.01	1.6 ± 0.08	0.4 ± 0.1
A3	17.8 ± 2.9	35.3 ± 6.3	0.51 ± 0.06	0.9 ± 0.4	0.5 ± 0.1
A7	20.1 ± 12.7	40.6 ± 2.7	0.49 ± 0.03	2.0 ± 1.6	0.3 ± 0.4
C3	12.2 ± 2.4	27.4 ± 4.1	0.45 ± 0.02	0.9 ± 0.2	0.5 ± 0.1
E1	4.2 ± 2.2	14.1 ± 6.2	0.29 ± 0.03	1.5 ± 0.4	0.2 ± 0.1
E12	3.9 ± 1.0	15.9 ± 1.8	0.24 ± 0.04	1.3 ± 0.4	0.3 ± 0.1
F6	11.1 ± 2.2	29.8 ± 2.8	0.38 ± 0.09	0.8 ± 0.2	0.2 ± 0.1
F11	9.8 ± 1.1	28.2 ± 2.8	0.35 ± 0.01	0.7 ± 0.2	0.3 ± 0.1
H7	21.3 ± 2.7	42.5 ± 9.9	0.51 ± 0.06	1.3 ± 0.6	1.0 ± 0.5
H10	19.4 ± 1.1	40.6 ± 0.1	0.48 ± 0.03	1.1 ± 0.2	0.4 ± 0.1
IA1	20.7 ± 0.7	45.1 ± 2.5	0.46 ± 0.01	1.2 ± 0.1	0.6 ± 0.1
IA11	2.3 ± 0.2	13.7 ± 1.0	0.17 ± 0.02	1.3 ± 0.1	0.2 ± 0.1
IA12	20.4 ± 1.6	44.1 ± 0.3	0.46 ± 0.03	1.4 ± 0.8	0.4 ± 0.1
IB12	10.9 ± 3.6	30.2 ± 5.6	0.37 ± 0.10	1.3 ± 1.1	0.4 ± 0.1
IH1	17.0 ± 5.8	45.1 ± 4.1	0.37 ± 0.10	1.9 ± 0.9	0.3 ± 0.1
IIA12	19.4 ± 8.3	41.3 ± 4.1	0.46 ± 0.20	1.0 ± 0.4	0.5 ± 0.1
IIB2	11.9 ± 1.1	37.2 ± 2.7	0.32 ± 0.05	0.7 ± 0.0	0.3 ± 0.1
IIB12	19.2 ± 0.9	45.3 ± 0.7	0.42 ± 0.01	1.9 ± 1.0	0.5 ± 0.1
IIC12	21.4 ± 6.4	45.5 ± 3.8	0.47 ± 0.10	2.2 ± 1.2	0.3 ± 0.1
IIIA1	21.3 ± 2.3	45.1 ± 3.6	0.51 ± 0.07	1.4 ± 0.7	0.5 ± 0.2
IIIA3	21.8 ± 3.1	44.3 ± 4.1	0.49 ± 0.05	2.1 ± 0.6	0.3 ± 0.1
IIIA5	12.0 ± 0.8	28.0 ± 1.3	0.43 ± 0.03	0.8 ± 0.2	0.4 ± 0.2
IIIC9	11.7 ± 1.1	37.4 ± 2.5	0.31 ± 0.02	0.7 ± 0.3	0.2 ± 0.1

[2,3-BD]_{max}= maximum 2,3-BD concentration achieved; [Glyc]_{com}= consumed glycerol concentration; [Acet]_{max}= maximum acetoin concentration produced; [EtOH]_{max}=maximum ethanol concentration produced; Y_{2,3-BD/Gly} = fermentation yield, grams of 2,3-BD obtained with respect to the grams of glycerol consumed.

Table S2. Comparison of wild-type and mutant strains obtained by random mutagenesis in bioreactor.

Strain	[2,3-BD] _{max} (g L ⁻¹)	[Glyc] _{cons} (g L ⁻¹)	Y _{2,3-BD/Glyc} (g g ⁻¹)	[Acet] _{max} (g L ⁻¹)	[EtOH] _{max} (g L ⁻¹)
CECT843	23.3 ± 1.4	64.7 ± 0.1	0.36 ± 0.02	6.7 ± 0.2	0.6 ± 0.3
IA1	30.8 ± 3.9	62.5 ± 0.9	0.49 ± 0.07	5.0 ± 1.0	0.5 ± 0.2
A7	27.4 ± 5.2	60.5 ± 7.3	0.45 ± 0.06	3.4 ± 1.4	0.2 ± 0.1
H7	25.3 ± 7.8	55.2 ± 7.3	0.45 ± 0.01	3.6 ± 1.7	0.4 ± 0.2

IA12	29.4 ± 0.8	63.2 ± 0.7	0.47 ± 0.01	5.0 ± 0.7	0.3 ± 0.1
IIC12	25.1 ± 2.7	56.0 ± 7.1	0.45 ± 0.10	2.0 ± 1.0	0.7 ± 0.4
IIIA1	30.1 ± 3.3	60.9 ± 0.9	0.49 ± 0.07	1.9 ± 0.2	0.9 ± 0.4
IIIA3	30.5 ± 0.4	57.6 ± 5.5	0.50 ± 0.01	2.4 ± 1.5	0.8 ± 0.3

[2,3-BD]max= maximum 2,3-BD concentration achieved; [Glyc]cons= consumed glycerol concentration; [Acet]max= maximum acetoin concentration produced; [EtOH]max=maximum ethanol concentration produced; Y_{2,3-BD/Glyc} = fermentation yield, grams of 2,3-BD obtained with respect to the grams of glycerol consumed.