Additional file 1 for

Functional screening of aldehyde decarbonylases for long-chain alkane production in *Saccharomyces cerevisiae*

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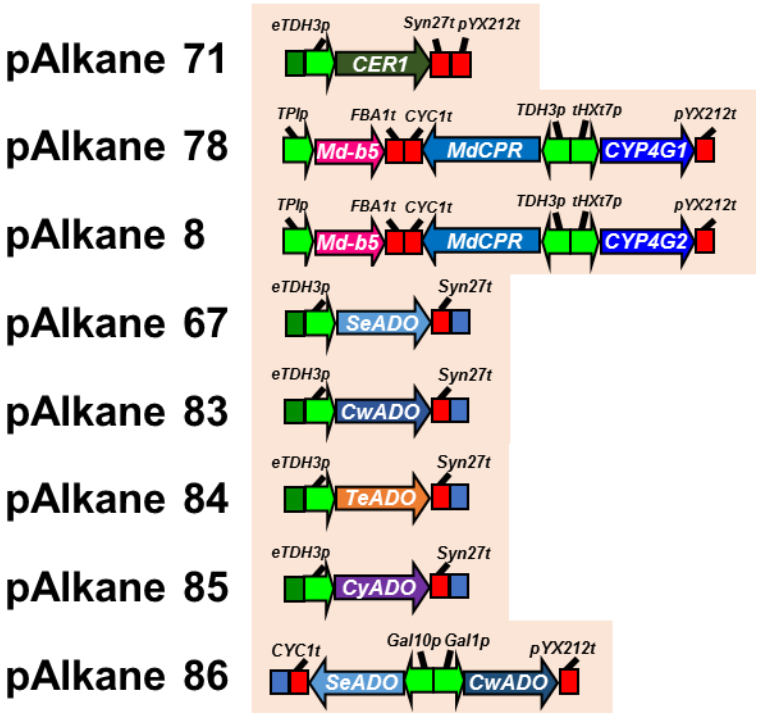

Figure S1. Scheme of plasmid constructs for alkane biosynthesis. pYX212 vector was used as a backbone to express ADs in engineered *S. cerevisiae* strains.

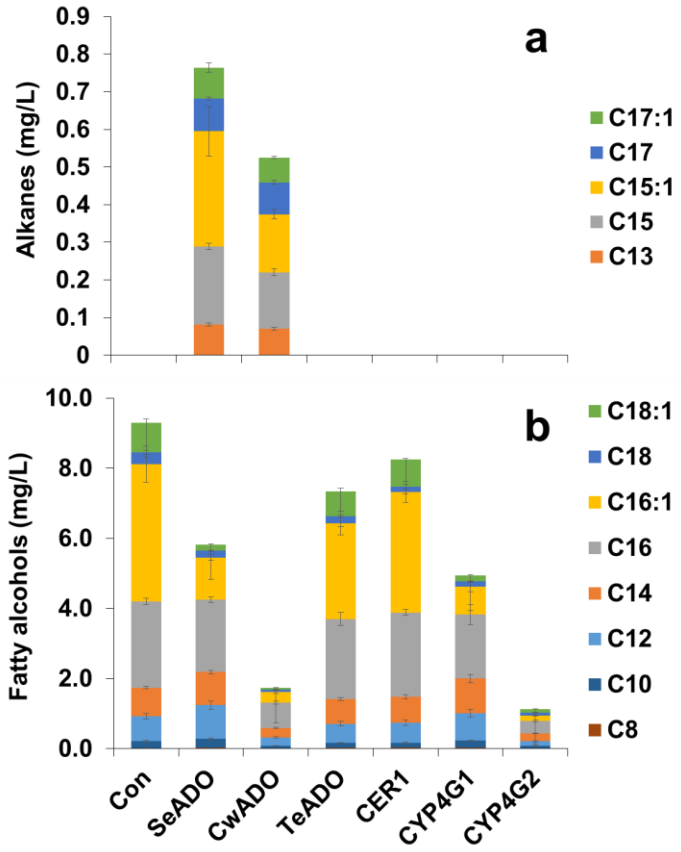

Figure S2. Comparison of alkane and fatty alcohol production by different AD expression in engineered *S. cerevisiae* strains. Alkane (a) and fatty alcohol (b) titers were displayed with the information of chain-length distribution of each engineered strain. All data represent the mean values and standard deviations from at least triplicate cultures.

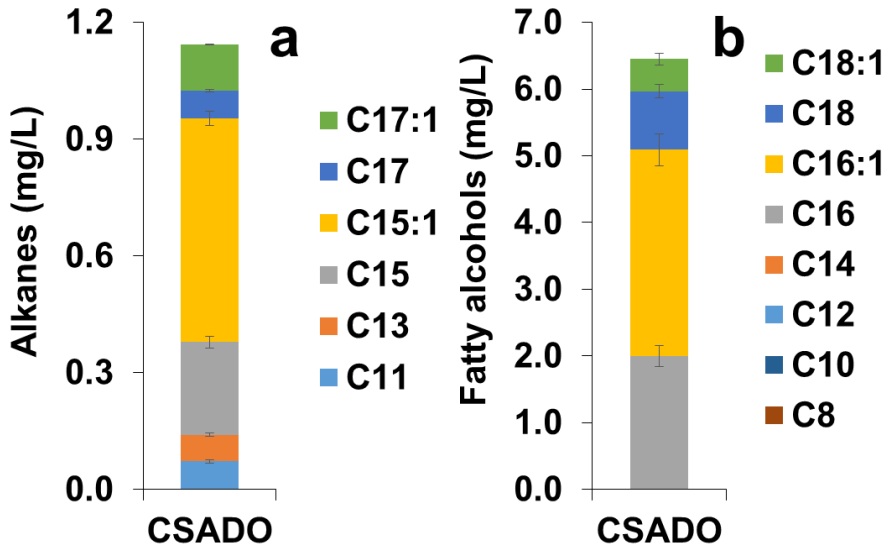

Figure S3. Production of alkanes (a) and fatty alcohols (b) with the information of chain-length distribution in the CSADO strain. All data represent the mean values and standard deviations from at least triplicate cultures.

Table S1. Primers used in this study

Name	Sequence (5'→ 3')
pYX212-F	TAGGGCCCACAAGCTTACGCGTCGACCCGGGTATCC
pYX212-R	GCCGTAAACCACTAAATCGGAACCCTAAAGG
eTDH3p-F	CTTTCACCAGCGTTTC
TDH3p-F	CTCGAGTTTATCATTATCAATACTGCCATTTC
TDH3p-R	GTTTGTTTATGTGTGTTTATTCGAAACTAAGTTCTTGGTG
tHXT7p-F	GTATTCTTTGAAATGGCAGTATTGATAATGATAAACTCGAGCTCGTAGGAACAATTTCG
tHXT7p-R	CATTTTTTGATTAAAATTAAAAAAACTTTTTGTTTTTGTG
TDIp-F	GTTTAAAGATTACGGATATTTAACTTACTTAGAATAATG
TDIp-R	CATTTTTAGTTTATGTATGTGTTTTTTGTAG
GAL1p-R	CATTATAGTTTTTTCTCCTTGACGTTAAAG
GAL10p-R	CATTTATATTGAATTTTCAAAAATTCTTAC
FBA1t-F	GTTAATTCAAATTAATTGATATAGTTTTTTAATGAG
FBA1t-R	AGTAAGCTACTATGAAAGACTTTACAAAGAAC
CER1-F	CAAGAACTTAGTTTCGAATAAACACACATAAACAAACAAAATGGCTACAAAACCAGGTGTCTTG
CER1-R	CTAGACAGTTATATATATATATATATATATATACCACCCATTAGTGATGAGGTAACAACAATGG
CYP4G1-F	CAAAAACAAAAAGTTTTTTTAATTTTAATCAAAAAATGGCCGTTGAAGTTGTTCAAGAAACC
CYP4G1-R	GGATACCCGGGTCGACGCGTAAGCTTGTGGGCCCTATTAAGCAACAGTAGCGTATTGTCTC
CYP4G2-F	CACAAAAACAAAAAGTTTTTTTAATTTTAATCAAAAAATGGACTCCGCCAACAACTC
CYP4G2-R	GGATACCCGGGTCGACGCGTAAGCTTGTGGGCCCTATTACATTGCCTTCATTGCTTC
MdCPR-F	CAAGAACTTAGTTTCGAATAAACACACATAAACAAACAAAATGAGTGCCGAACACGTTGAAG
MdCPR-R	GTGACATAACTAATTACATGACTCGAGGTCGACGGTATCTTAACTCCAAACATCAGCGGAG
Md-b5-F	CTATAACTACAAAAAACACATACATAAACTAAAAATGTCCTCCGAAGATGTAAAG
Md-b5-R	CTCATTAAAAAACTATATCAATTAATTTGAATTAACTTATTGTGACTTAGTACCAAAG
SeADO-F	GAACTTAGTTTCGAATAAACACACATAAACAAACAAAATGCCACAATTAGAAGCCTCC
SeADO-R	GATACCCGGGTCGACGCGTAAGCTTTGAAAGATGATACTCTTTATTTCTAGACAGTTATATATATATATATATATATATATATACCACCCATTAGACTGCTGCCAAACCGTATGC
CwADO-F	GAACTTAGTTTCGAATAAACACACATAAACAAACAAAATGCAAGAATTGGCAGTCAGAAGTG

CwADO-R	CTAGACAGTTATATATATATATATATATATATATACCACCCATTAGACAGCGGCTAAACCGTGGGCTG
TeADO-F	GAACTTAGTTTCGAATAAACACACATAAACAAACAAAATGACTACTGCCACCGCTACTCCTG
TeADO-R	CTAGACAGTTATATATATATATATATATATATATACCACCCATTAAGCACCAGTCAAACCATAAAC
CyADO-F	GAACTTAGTTTCGAATAAACACACATAAACAAACAAAATGCCACAAGTTCAATCCCCATCC
CyADO-R	CAGTTATATATATATATATATATATATATACCACCCATTAAGCAGCGGACAAACCATAAACAG
CwADO-F(86)	GTTAATATACCTCTATACTTTAACGTCAAGGAGAAAAAACTATAATGCAAGAATTGGCAGTCAGAAGTG
CwADO-R(86)	GGATACCCGGGTCGACGCGTAAGCTTGTGGGCCCTATTAGACAGCGGCTAAACCGTGGGCTG
SeADO-F(86)	GTCCATCCAAAAAAAAAGTAAGAATTTTTGAAAATTCAATATAAATGCCACAATTAGAAGCCTCCTTAG
SeADO-R(86)	CATAACTAATTACATGACTCGAGGTCGACGGTATCTTAGACTGCTGCCAAACCGTATGCGGAC