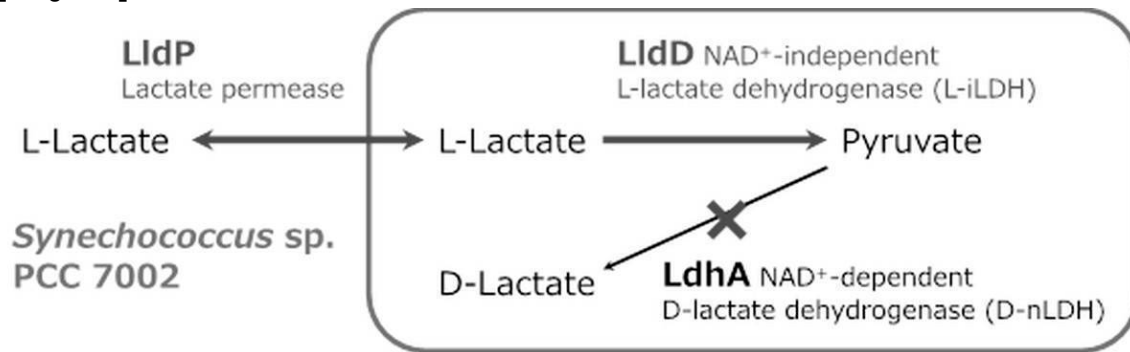


[DRAWINGS]

[Fig. 1]



[Fig. 2]

***E. coli* LldD**

```
>NP_418062.1      L-lactate      dehydrogenase
[Escherichia coli str. K-12 substr. MG1655]
MIISAASDYRAAAQRILPPFLFHYMDGGAYSEYTLRRNVEDLSEVALR
QRILKNMSDLSLETTLFNEKLSMPVALAPVGLCGMYARRGEVQAAKAA
DAHGIPFTLSTVSVCPPIEEVAPAIKRPMWFQLYVLRDRGFMRNALERA
KAAGCSTLVFTVDMPTPGARYRDAHSGMSGPNAMRRYLQAVTHPQWA
WDVGLNGRPHDLGNISAYLGKPTGLEDYIGWLGNNFDPISISWKDLEWI
RDFWDGPMVIKGI LDPEDARDAVRFGADGIVVSNHGGRQLDGVLSAR
ALPAIADAVKGDIAILADSGIRNGLDVVRMIALGADTVLLGRAFLYAL
ATAGQAGVANLLNLIEKEMKVAMTLTGAKSISEITQDSLVOGLGKELP
AALAPMAKGNAA*
```

[Fig. 3]

***E. coli* LldP**

```
>NP_418060.1 lactate/glycolate:H(+) symporter LldP
[Escherichia coli str. K-12 substr. MG1655]
MNLWQQNYDPAGNIWLSSLIASLPILFFFFALIKLKLKGYVAASWTVAIA
LAVALLFYKMPVANALASVVYGGFFYGLWPPIAWIIIAAVFVYKISVKTGQF
DIIRSSILSITPDQRLQMLIVGFCFGAFLEGAAGFGAPVAITAALLVGLG
FKPLYAAGLCLIVNTAPVAFGAMGIPILVAGQVTGIDSFEIGQMVGRLP
FMTIIVLFWIMAIMDGWRGIKETWPAVVVAGGSFAIAQYLSSNFIGPELP
DIISLVSLCLTLFLKRWQPVRVFRFGDLGASQVDMTLAHTGYTAGQVL
RAWTPFLFLTATVTLWSIPPFKALFASGGALYEWVINIPVPYLDKLVARM
PPVVSEATAYAAVFKFDWFSATGTAILFAALLSIVWLKMKPSDAISTFGS
TLKELALPIYSIGMVLAFAFISNYSGLSSTLALALAHTGHAFTFFSPFLG
WLGVFLTGS DTSNALFAALQATAAQQIGVSDLLVAANTTGGVTGKMIS
PQSIAIACAAGLVGKESDLFRFTVKHSLIFTCTIVGVITTLQAYVLTWMI
P*
```

[Fig. 4]

***E. coli lldD* (codon optimized)**

ATGATCATCAGTGCTGCTCTGACTATCGAGCAGCTGCTCAGCGAATTCTACCTCCCTTCCTGTTCC
 ACTACATGGATGGTGGTGCCTACTCGGAGTACACCTCCGCCGTAATGTCGAGGATCTGAGTGAAGT
 GGCGCTGCGGCAGCGGATTCTGAAGAACATGAGCGACCTCTCCTTGGAACCACCTGTTCAACGAA
 AAACCTCTCGATGCCGGTTGCGCTAGCGCCAGTAGGTCTCTGTGGCATGTACGCGCGTCGCGGTGAGG
 TGCAAGCCGCCAAAGCCGCTGATGCCCATGGAATTCATTTACTTTATCGACGGTGTCGGTCTGCCC
 GATTGAAGAAGTTGCTCCGGCGATCAAGCGACCAATGTGGTTTCAACTCTACGTCCTGCGCGATCGC
 GGCTTCATGCGGAATGCCCTTGAGCGGGCTAAAGCGGTGGCTGCAGCACGCTGGTCTTCACGGTCG
 ATATGCCTACTCCCGGCGCTCGCTATCGCGATGCCCACTCCGGGATGTCCGGCCCCAACGCAGCGAT
 GCGCCGCTATCTCCAGGCAGTCACCCATCCCCAGTGGGCTTGGGATGTTGGCCTCAATGGACGTCCC
 CACGATCTAGGCAATATTTAGCTTATCTGGGTAAGCCACGGGTCTGGAGGACTACATCGGGTGGC
 TGGGTAACAACCTTTGATCCCAGCATCAGCTGGAAGGATTTAGAGTGGATTTCGTGACTTTTGGGACGG
 TCCGATGGTGATCAAAGGCATTCTCGATCCGGAAGACGCGCGTGACGCAGTTTCGCTTTGGCGCCGAT
 GGCATCGTGGTCAGCAATCATGGCGGTGCGCAACTGGATGGCGTGCTGTCTGCTCGAGCATTGCT
 CTGCTATCGCTGATGCTGTCAAAGGCGATATCGCGATCTTGGCGGACAGTGGAAATTCGCAATGGGCT
 TGATGTGGTTTCGGATGATTGCCCTTGGGAGCAGACACAGTGCTCTTGGGGCGCGCCTTTCTCTATGCC
 CTTGCGACTGCCGGGCAAGCGGGCGTTGCCAATTTGCTCAACCTGATTGAGAAAGAAATGAAGGTCG
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 CAAGGAAGTGCCTGCGGCCCTTAGCACCGATGGCCAAGGGCAACGCTGCATAA

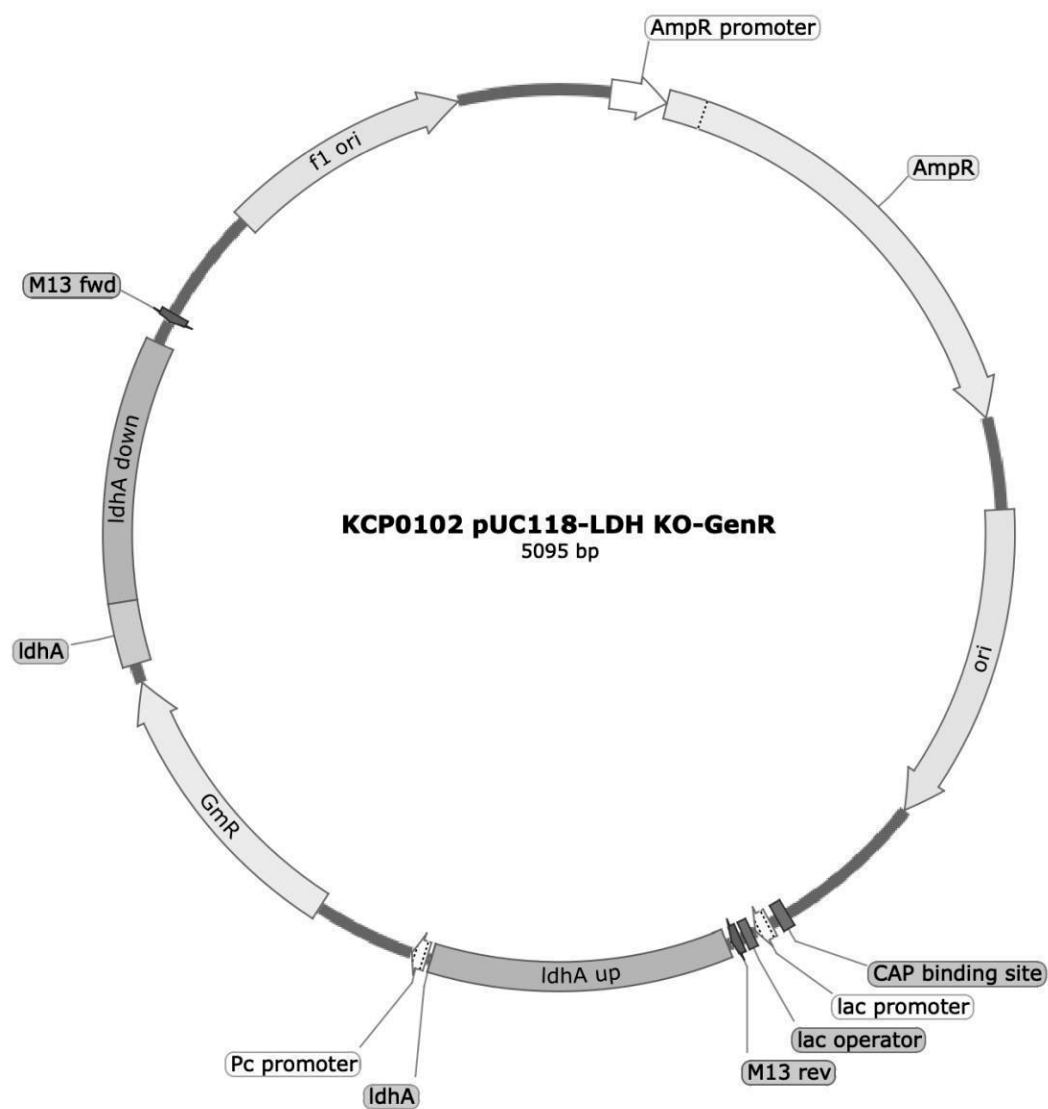
[Fig. 5]

***E. coli lldP* (codon optimized)**

ATGAATCTGTGGCAGCAAACTACGACCCAGCAGGCAACATCTGGCTGTCTCGCTTATTGCGTCCTTGCCGATTCTG
 TTCTTCTTCTTTGCATTGATCAAACTGAAGCTGAAAGGCTACGTCGCGCGAGTTGGACGGTGGCTATTGCTCTGGCA
 GTGGCGCTGCTCTCTACAAAATGCCGGTCGCCAATGCCTTAGCGTCTGTTGTCTATGGCTTTTTTTACGGCCTTTGG
 CCAATTGCCTGGATTATCATTTGCAGCGGTTTTTGTCTACAAGATTTCCGGTCAAAACCGGGCAGTTTGATATCATTCCA
 TCGTCGATATTGAGTATCACCCAGATCAGCGTCTCCAAATGCTGATTGTGGGCTTCTGCTTTGGGGCTTTCTCTCGAA
 GGGGCGAGCAGGTTTGGAGCACCCGTGGCGATTACTGCTGCGTTGCTGGTTCGGGCTGGGTTTTAAGCCTCTCTATGCA
 GCCGGACTCTGCTTGATCGTCAATACTGCCCCGTTGCTTTGGTGCGATGGGCATTCCCATCTTGGTCGCTGGTCAA
 GTCACGGGAATCGACAGTTTTTGAGATTGGTCAGATGGTGGGGCGGCAACTCCCTTTCATGACGATCATCGTTCTGTTT
 TGGATCATGGCGATTATGGATGGCTGGCGAGGTATCAAGGAAACCTGGCCGGCGGTAGTGGTGGCCGGCGGGAGCTTC
 GCGATCGCCCAGTATCTCAGCAGCAACTTTATCGGTCTGAACTGCCCGATATTATTTCTAGTCTGGTTAGCTTGCTT
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 GTAACGCTCTGGAGCATACCGCCTTTCAAAGCACTGTTTGCCTCGGGAGGTGCCCTCTACGAGTGGGTGATTAATATT
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 AAGTTTGACTGGTTTTAGCCACGGGAACAGCCATTCTTTTTGCTGCTCTTCTCAGTATTGTTTGGCTCAAGATGAAA
 CCGAGCGATGCGATCAGTACCTTCGGCTCTACGCTAAAAGAGTTAGCTCTACCGATCTACAGCATTGGGATGGTCCTA
 GCATTTGCCTTTATCAGCAATTATTAGGCCTGTCTTCAACACTGGCCTTGGCTTTGGCCCATAACAGGCCACGCGTTC
 ACCTTTTTCTCGCCCTTTTTAGGTTGGCTGGGCGTCTTTCTGACCGGTTCCGACACCAGCTCCAACGCTTTGTTTCGCG
 GCACTGCAGGCTACTGCAGCCCAACAGATTGGTGTCAAGTATTGCTGTTGGTGGCTGCTAACACGACCGGCGGCGTG
 ACTGGCAAGATGATCTCCCCCAGTCGATCGCAATCGCTTGTGCTGCTGTGGGCTTAGTTGGCAAAGAAAGCGATTG
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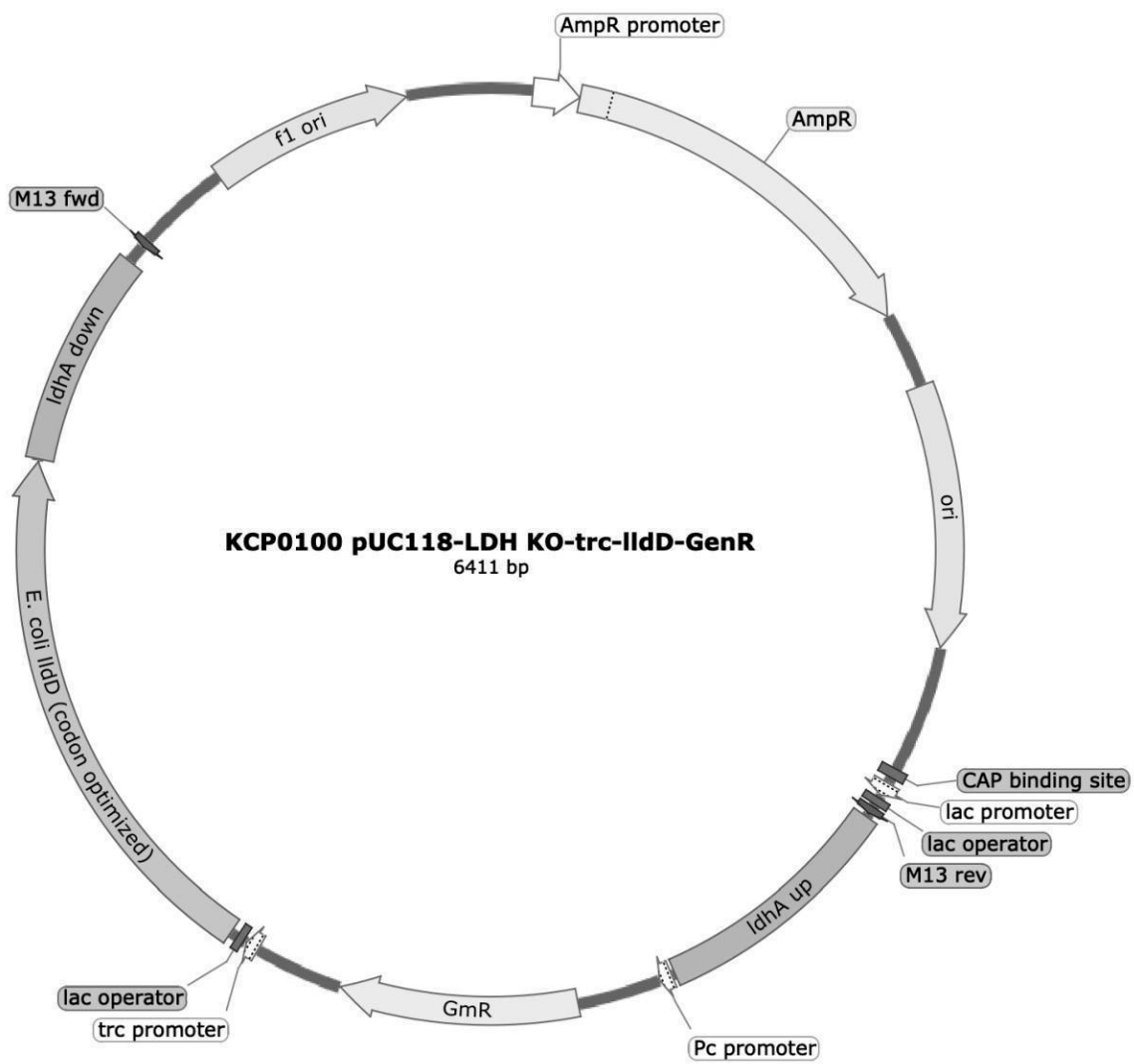
[Fig. 6]

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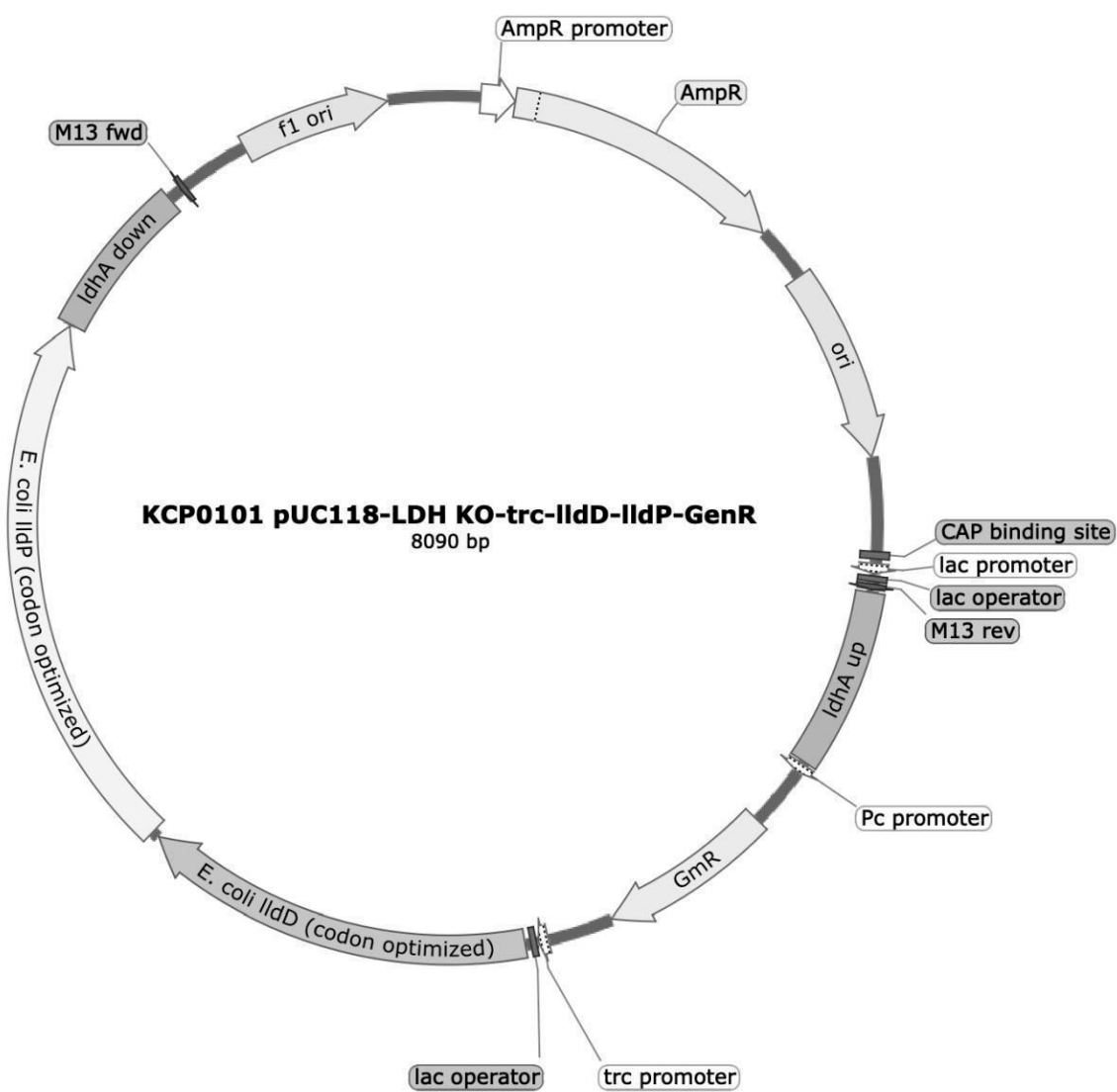
[Fig. 7]

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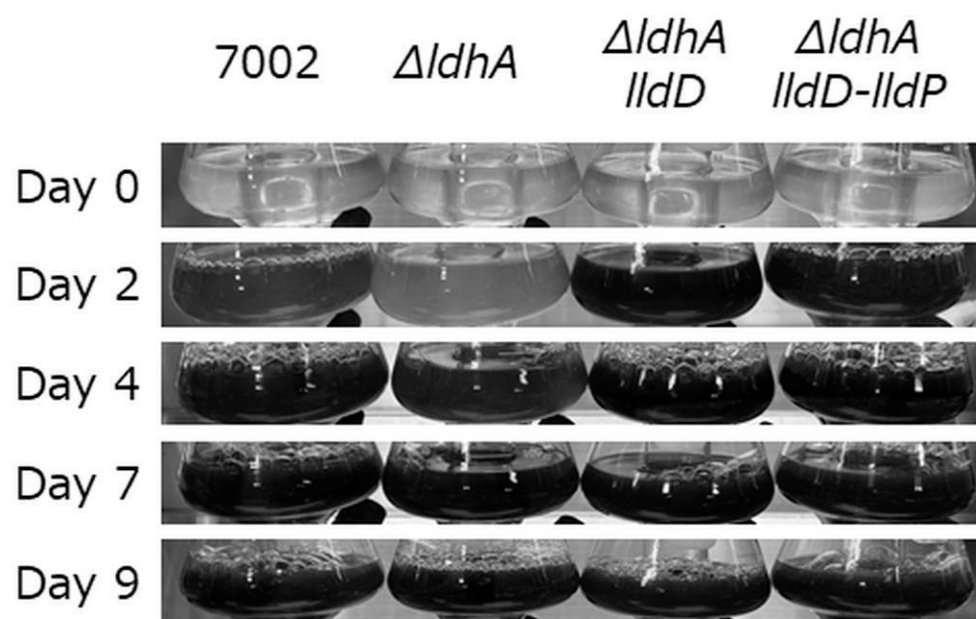
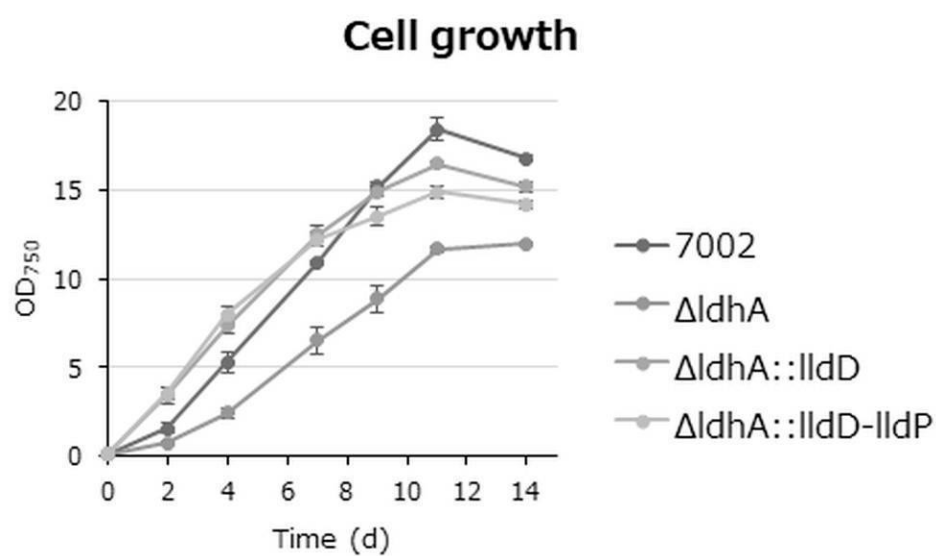


[Fig. 8]

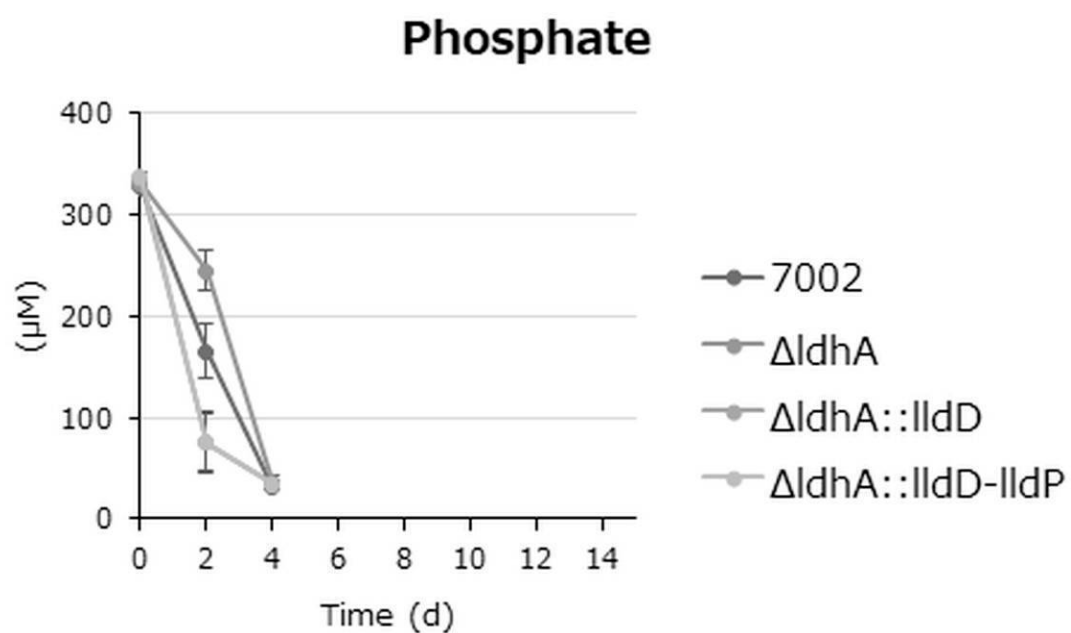
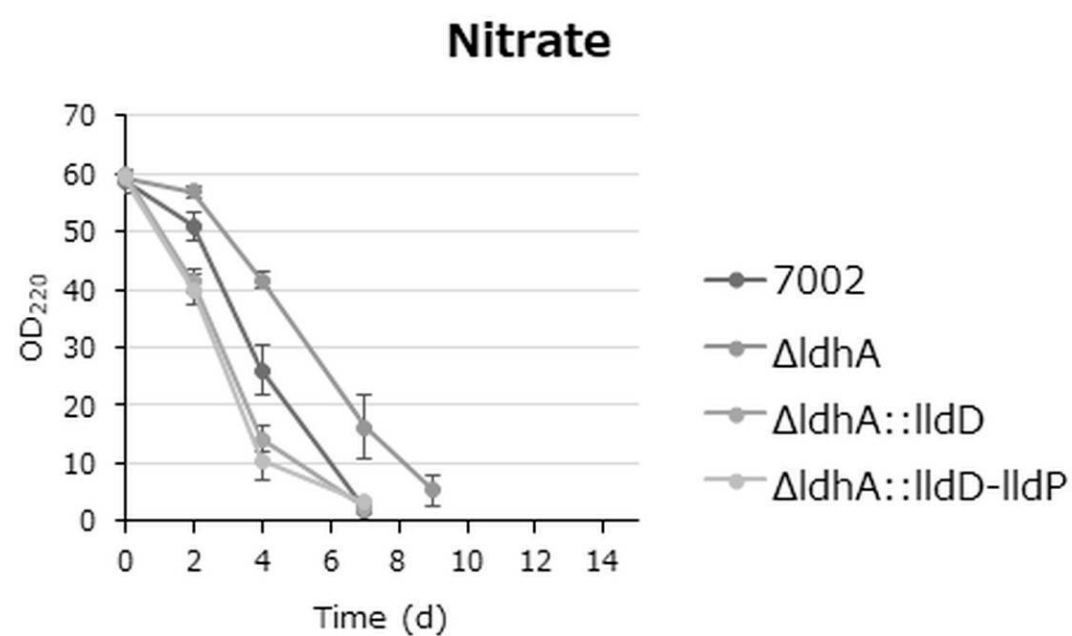
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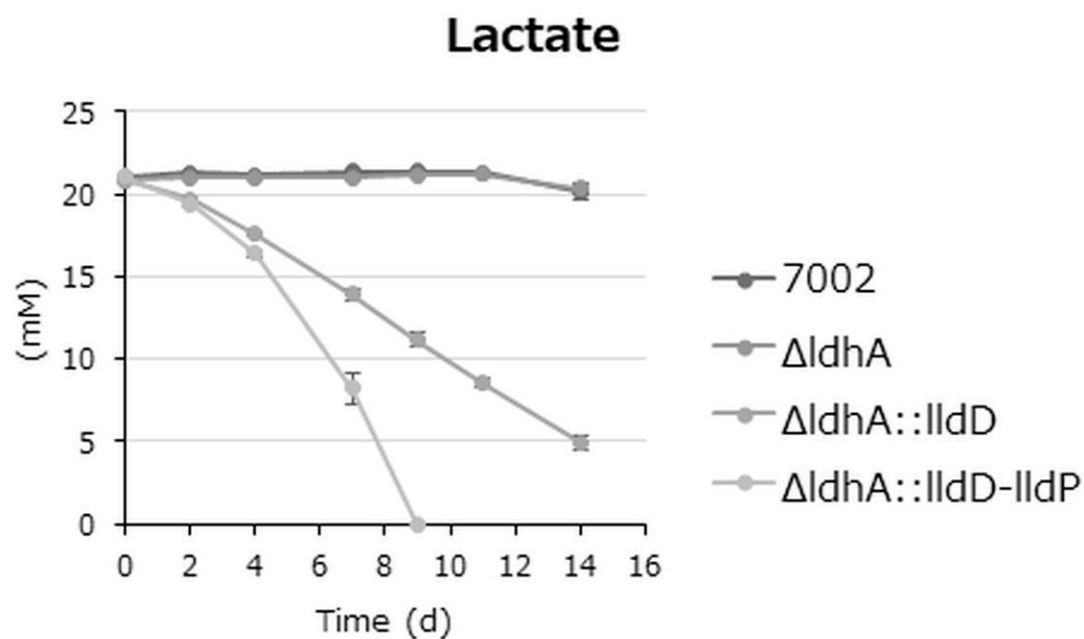
[Fig. 9]



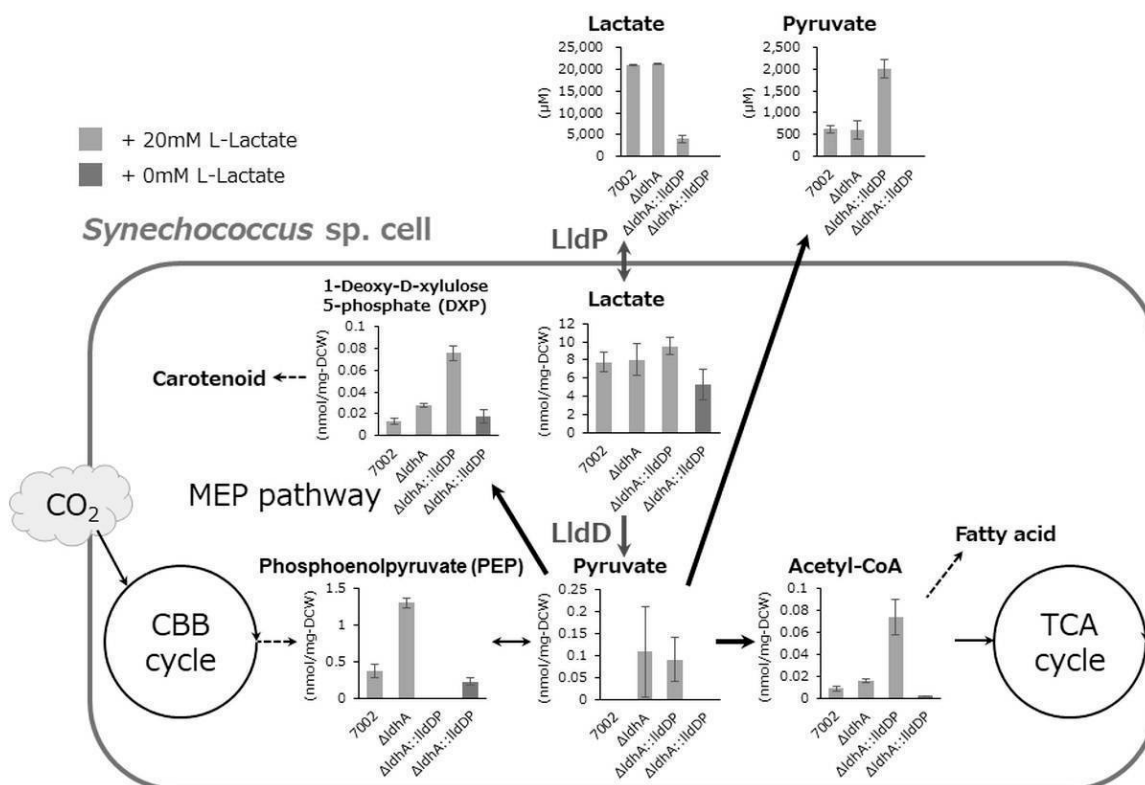
[Fig. 10]



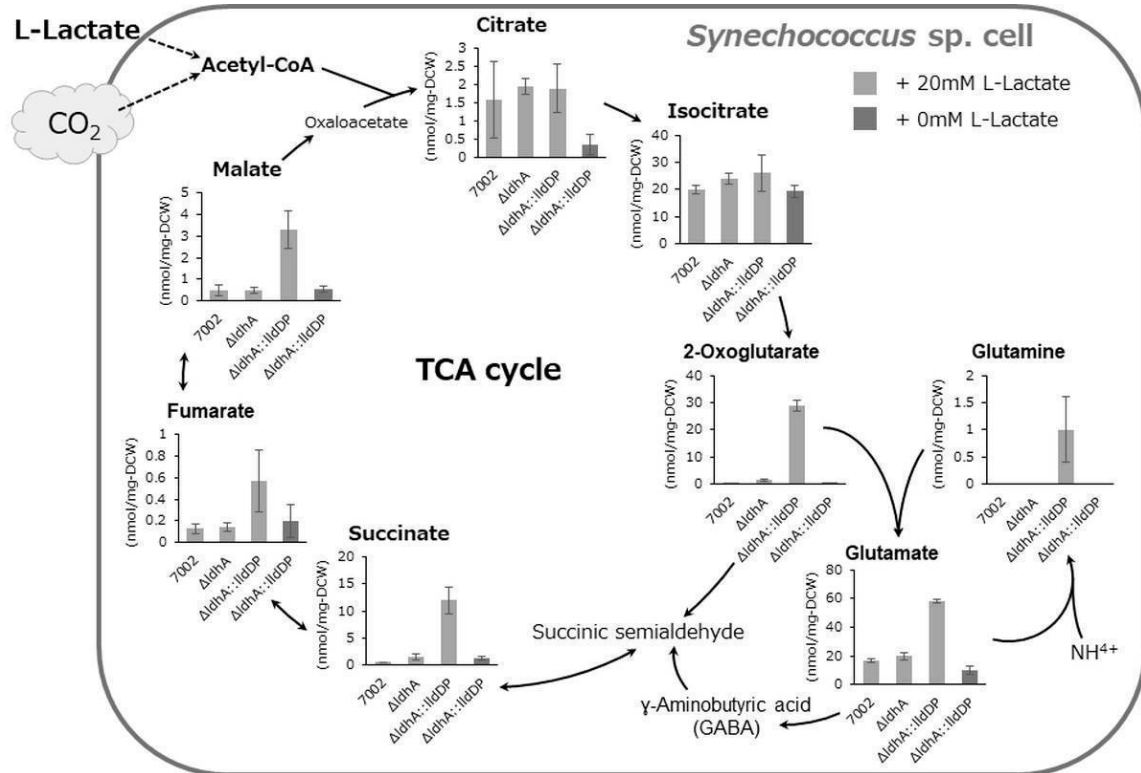
[Fig. 11]



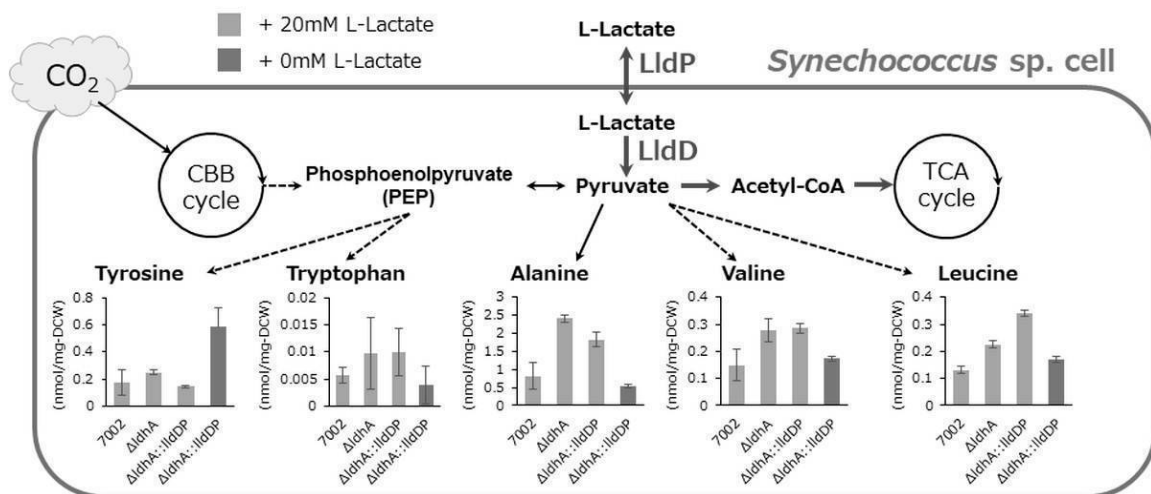
[Fig. 12]



[Fig. 13]



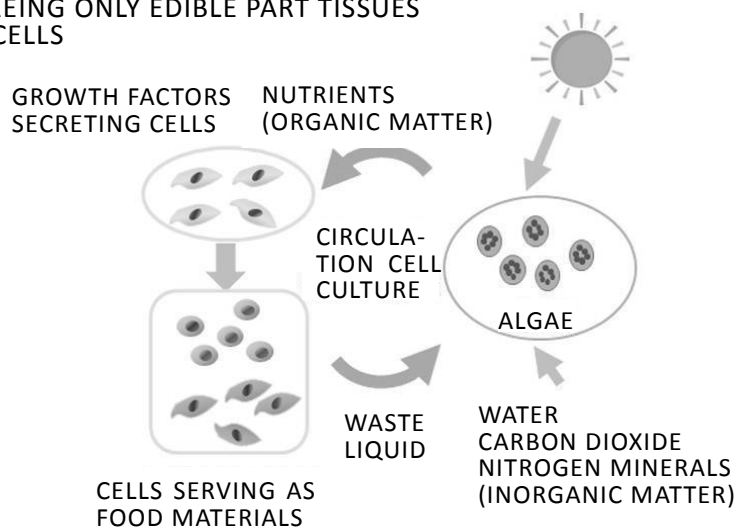
[Fig. 14]



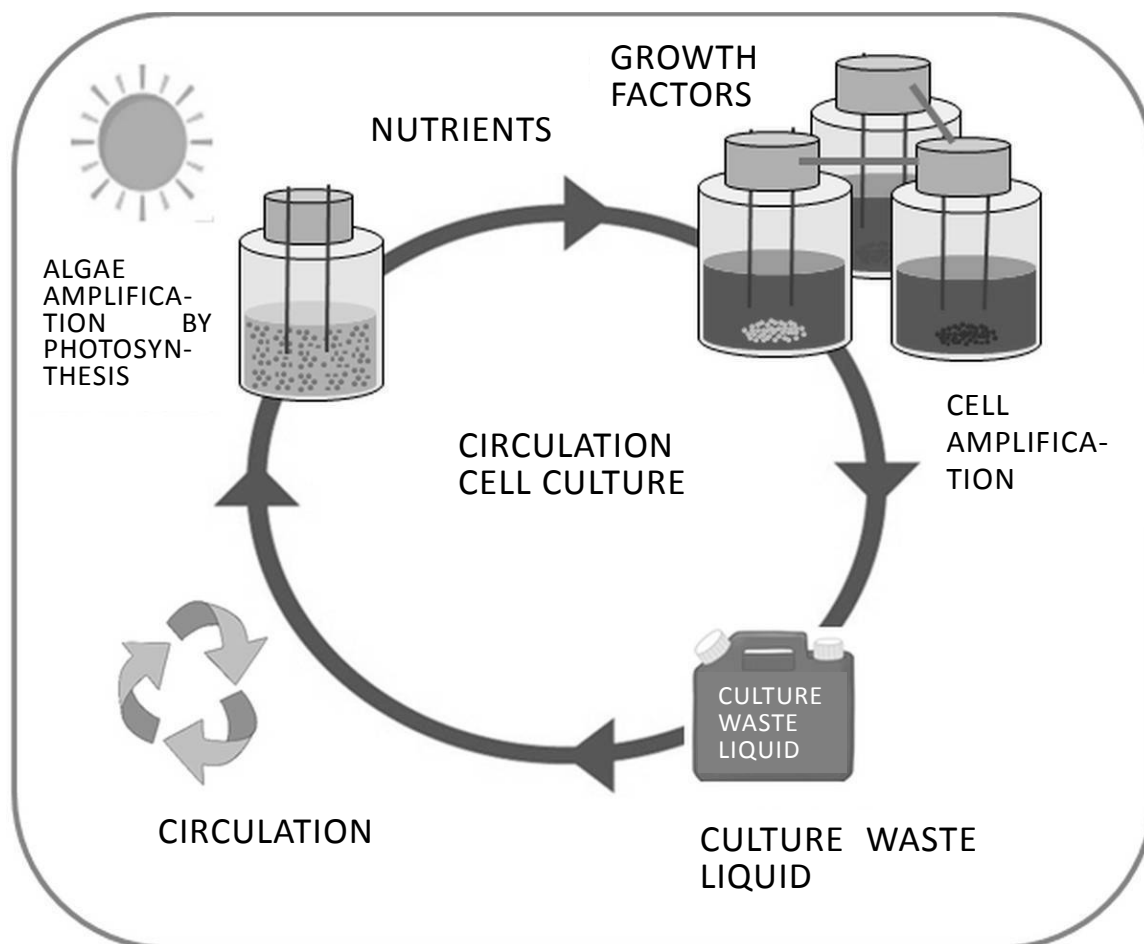
[Fig. 15]

SUSTAINABLE AND EFFICIENT FOOD PRODUCTION THROUGH CELL CULTURE AND ORGANIZATION USING ALGAE AS NUTRIENT SOURCE

SUSTAINABLE AND EFFICIENT NOVEL FOOD PRODUCTION
PREPARING ONLY EDIBLE PART TISSUES FROM CELLS



[Fig. 16]



[Fig. 17]

PROCESS OF PRODUCING CULTURED MEAT

