

# KELOMPOK 2



dwianTy putri MEItasari

21113003

RISMA wIHARyanti

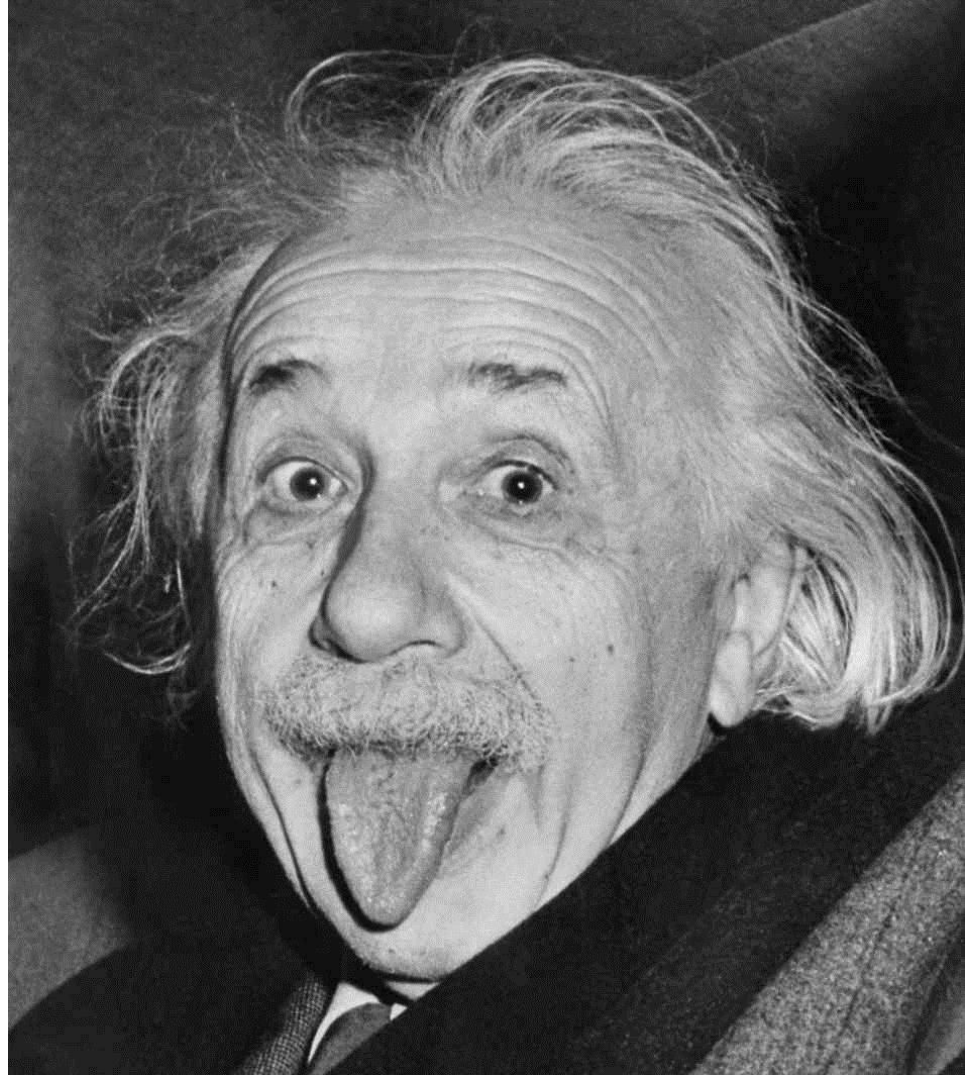
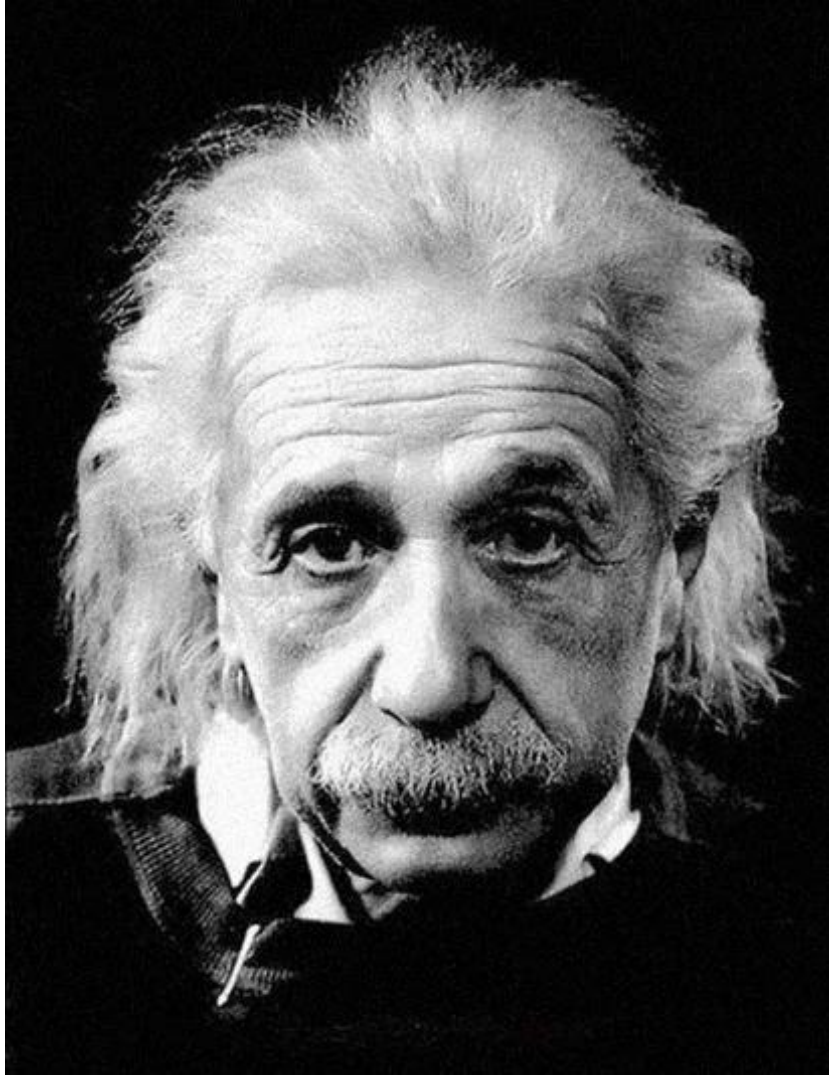
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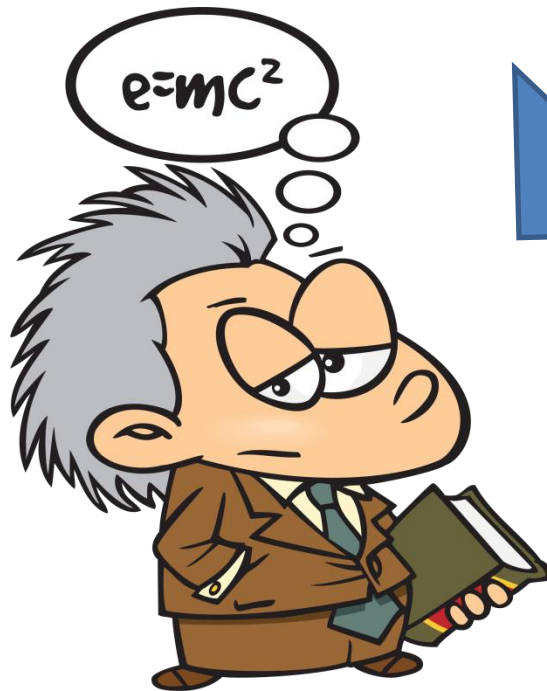
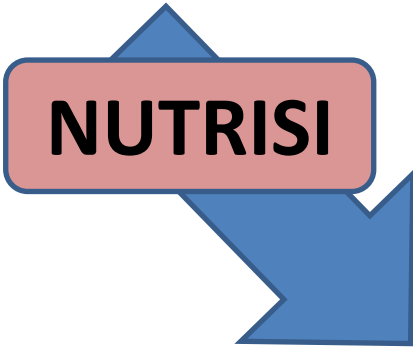
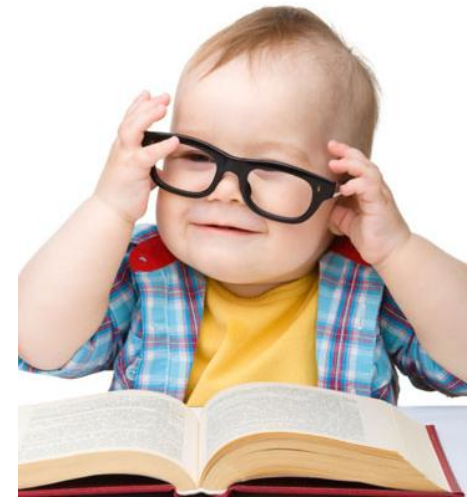
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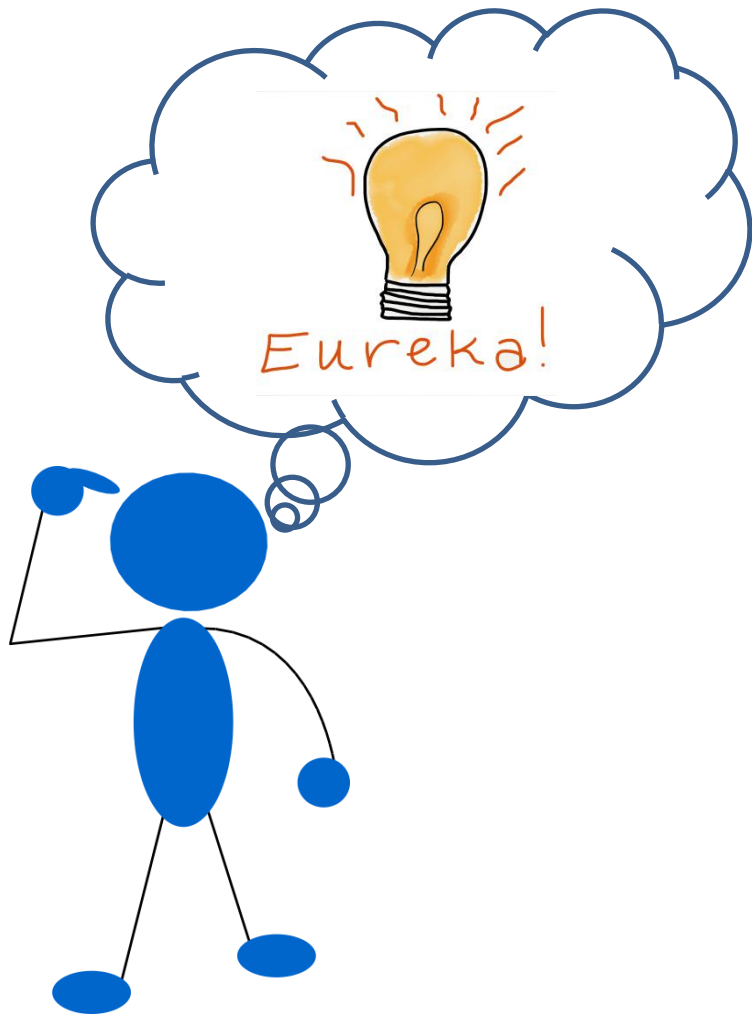
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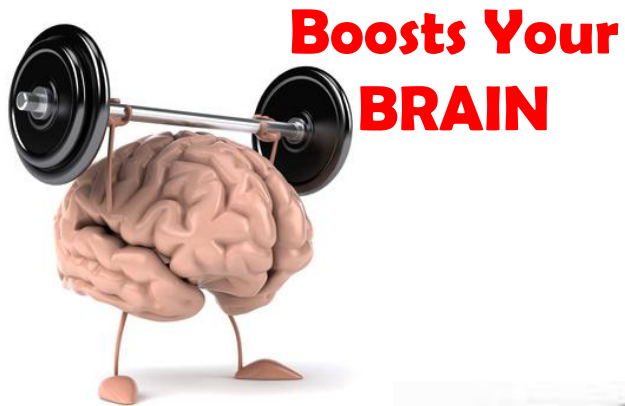
21113034











**Boosts Your  
BRAIN**

DHA (*docosahexaenoic acid*) ialah sejenis asam lemak tidak jenuh ganda omega-3 berantai panjang yang berada dalam setiap sel di dalam tubuh. DHA merupakan salah satu nutrisi yang sangat dibutuhkan untuk perkembangan sensori, persepsual, kognitif dan sistem saraf motorik selama masa emas pertumbuhan otak.



## Are there **fish-free** omega-3 fatty acids?



THANKFULLY, YES!

Sure are! And they're perfect for a healthy heart, brain, skin, and joints.

Eat flax seeds, flax oil, walnuts, hemp seeds, purslane, and vegan omega-3 DHA.













apa itu smart yogurt?



# smart yoghurt



DHA (*docosahexaenoic acid*)



pEmAnis  
alami



pEwaRNa  
alami



aROMa  
alami



M  
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# 1970's

Frozen yogurt was first introduced to the world in the early 1970s in New England.

1980's  
the first  
frozen yo

## froyo fun facts

In one



The tart and tangy frozen yogurt that is currently so popular originated in Seoul, South Korea before coming to South California.



Americans spend over **\$200 MILLION** on frozen yogurt each year.



# Manfaat yoghurt



Meningkatkan sistem imun



Rendah lemak dan kalori



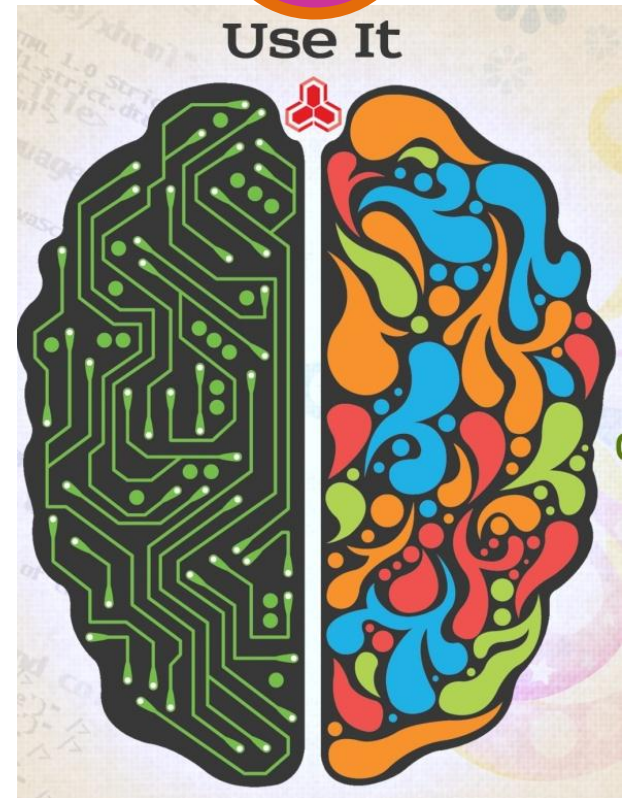
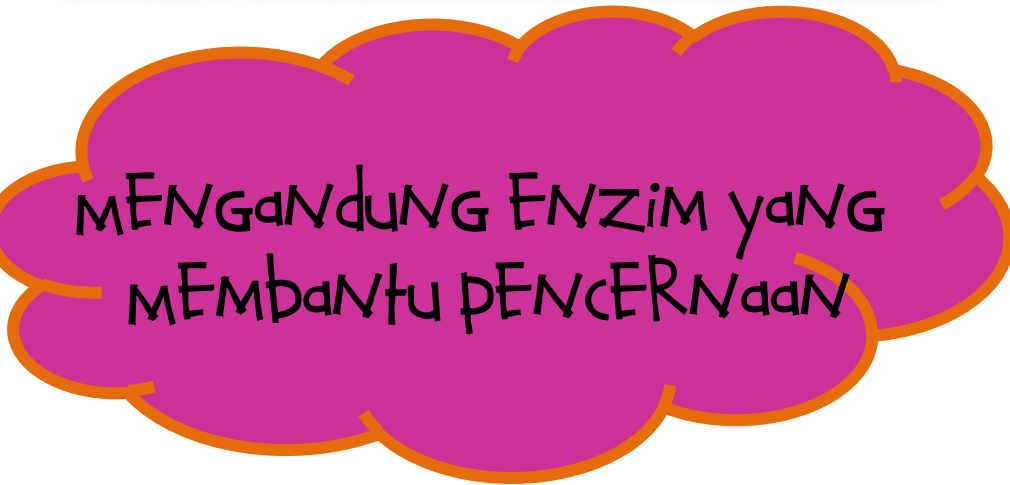
Tinggi kalsium dan kandungan protein



Menurunkan resiko kanker

THE FRANCHISE CHATTER  
GUIDE TO YOGURTLAND

THIS LAND IS YOUR LAND, THIS LAND IS YOGURTLAND





# bagaimana membuatnya



ENGINEERED



final product



Lactobacillus  
wildtype

Lactobacillus  
ENGINEERED

Smart Ioghurt



# ELEMEN GENETIK



docosahEXaENOic acid



cuRculin



aRoma dan PEwaRNA

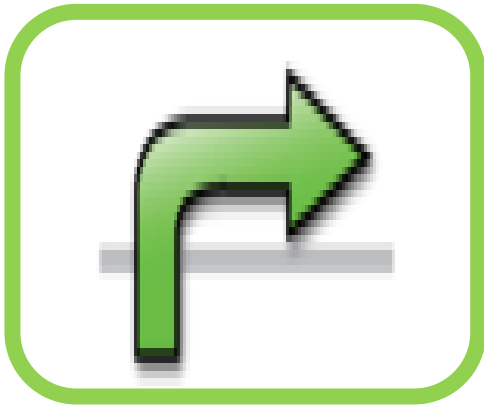


KOHNSTRUKSI

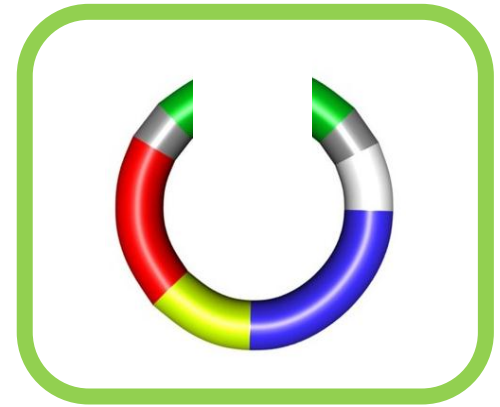




# eLEMeN gEnetiK



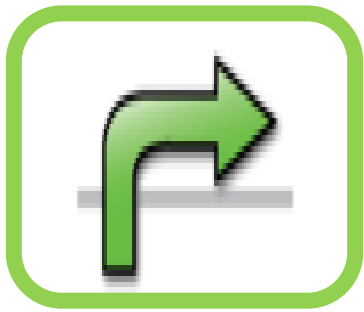
*pRomoteR*



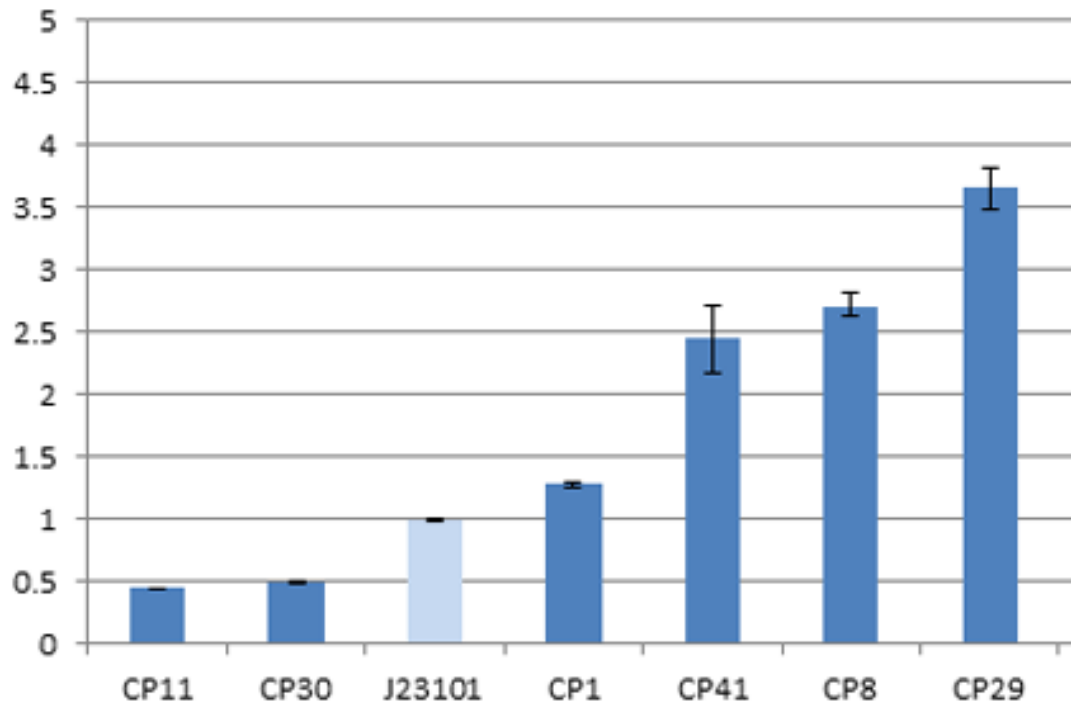
*backbone*



*siNyal pEptida*

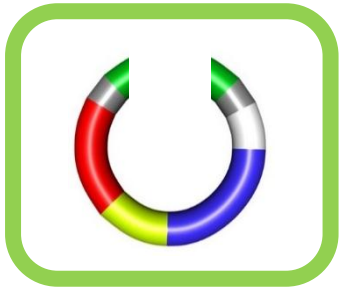


# Promoter



| Promoter | Strength [RPU] |
|----------|----------------|
| CP11     | 0.44           |
| CP30     | 0.50           |
| J23101   | 1.00           |
| CP1      | 1.28           |
| CP41     | 2.45           |
| CP8      | 2.71           |
| CP29     | 3.67           |

```
>BBa_K1033222 Part-only sequence (59 bp)  
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```



# backbone

SHUTTLE vECTOR untuk  
*E.coli* dan *L.bulgaricus*

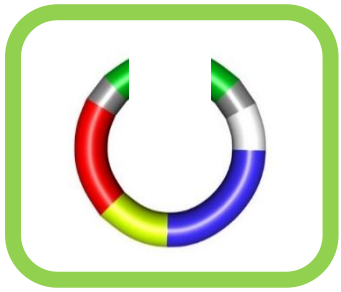


RESISTEN chlORAMPENicol  
pSBLbC (BBa\_K1033206)



RESISTEN ERyTHROMycin  
pSBLbE (BBa\_K1033207)

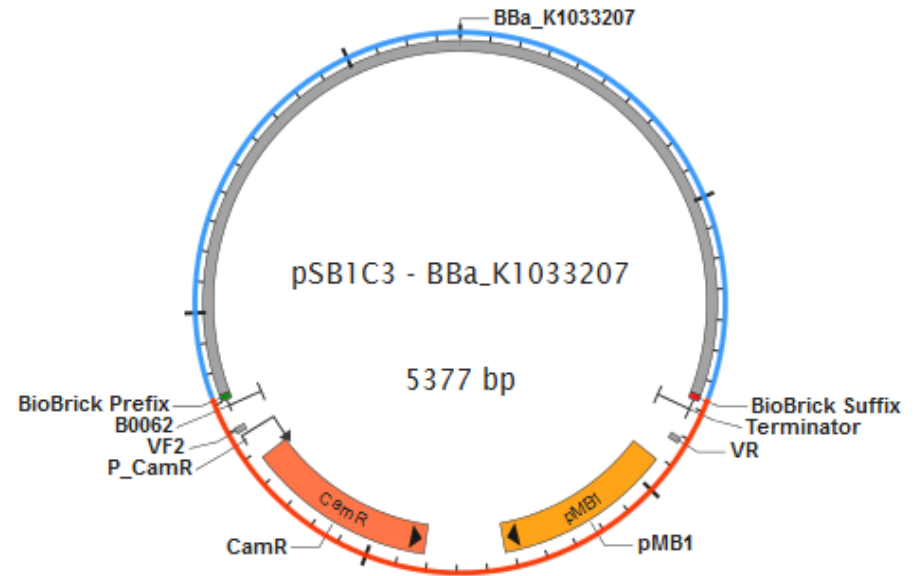
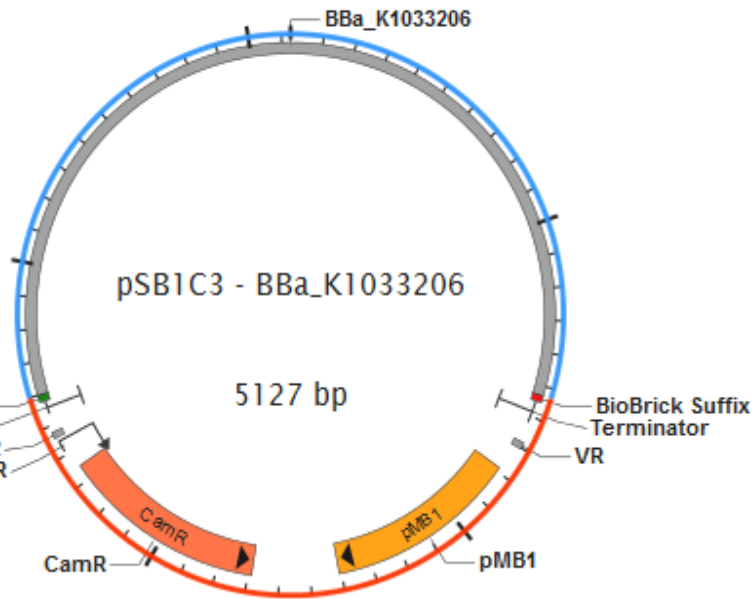




# backbone

RESISTEN chloRampENicol

RESISTEN ERythrOmycin





signal peptide

Part:BBa\_K1033241

Designed by: Anton Berglund Group: iGEM13\_Uppsala (2013-08-23)



|                     |
|---------------------|
| Not Released        |
| Sample Not in stock |
| No Results          |
| No Sequence         |
| Get This Part       |

## Signal peptide from Lactococcus lactis usp45

Signal peptide from Lactococcus lactis MG1363 protein usp45

Sequence and Features

Subparts | **Ruler** | [SS](#) | [DS](#)      Length: 0 bp [Get part sequence.](#)   [View plasmid](#)

Assembly Compatibility: 10 12 21 23 25 1000



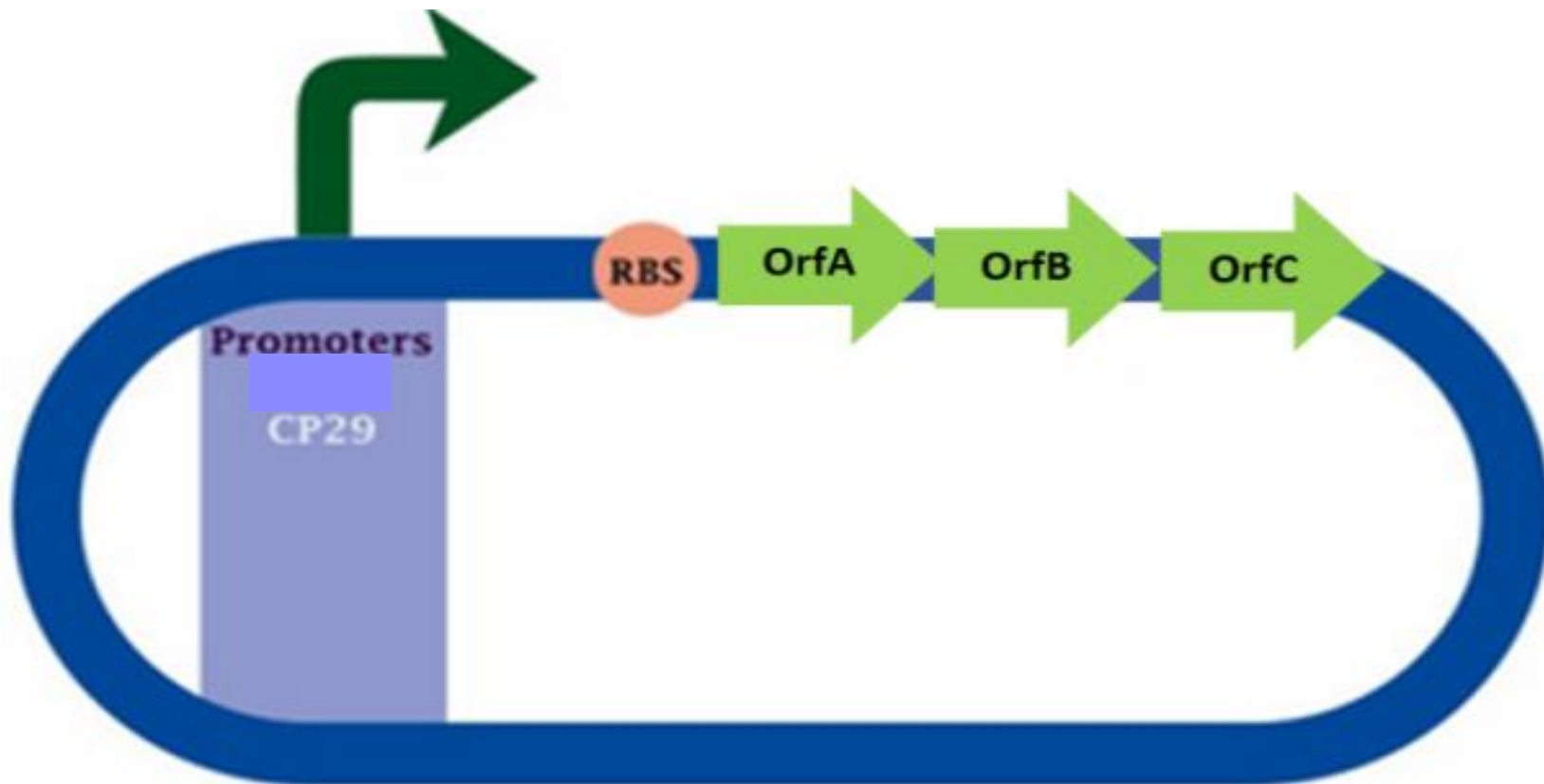
docosahexaenoic  
acid







# docosahexaenoic acid





# docosahexaenoic acid

Orf A

## Schizochytrium sp. ATCC\_20888 polyunsaturated fatty acid synthase subunit A gene, complete cds

GenBank: AF378327.2

[FASTA](#) [Graphics](#)

[Go to:](#)

LOCUS AF378327 8733 bp DNA linear PLN 22-OCT-2007  
DEFINITION Schizochytrium sp. ATCC\_20888 polyunsaturated fatty acid synthase subunit A gene, complete cds.  
ACCESSION AF378327

Orf B

## Schizochytrium sp. ATCC\_20888 polyunsaturated fatty acid synthase subunit B gene, complete cds

GenBank: AF378328.2

[FASTA](#) [Graphics](#)

[Go to:](#)

LOCUS AF378328 6180 bp DNA linear PLN 22-OCT-2007  
DEFINITION Schizochytrium sp. ATCC\_20888 polyunsaturated fatty acid synthase subunit B gene, complete cds.  
ACCESSION AF378328

Orf C

## Schizochytrium sp. ATCC\_20888 polyunsaturated fatty acid synthase subunit C gene, complete cds

GenBank: AF378329.2

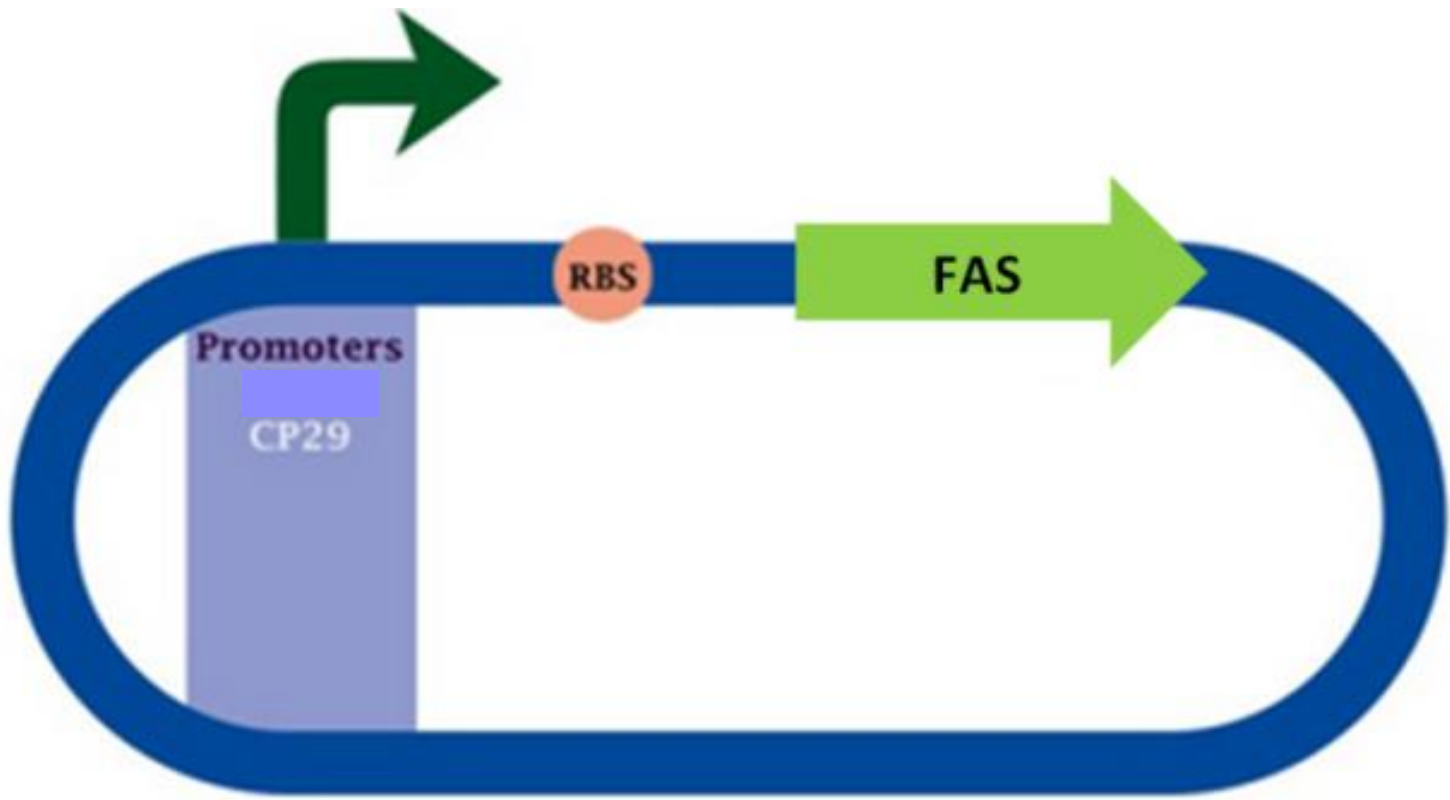
[FASTA](#) [Graphics](#)

[Go to:](#)

LOCUS AF378329 4509 bp DNA linear PLN 22-OCT-2007  
DEFINITION Schizochytrium sp. ATCC\_20888 polyunsaturated fatty acid synthase subunit C gene, complete cds.  
ACCESSION AF378329



# docosahexaenoic acid





# docosahexaenoic acid

## Schizochytrium sp. ATCC 20888 type I fatty acid synthase gene, complete cds

GenBank: EF015632.1

[FASTA](#) [Graphics](#)

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[Go to:](#)

LOCUS EF015632 12411 bp DNA linear PLN 28-OCT-2006  
DEFINITION Schizochytrium sp. ATCC 20888 type I fatty acid synthase gene,  
complete cds.  
ACCESSION EF015632  
VERSION EF015632.1 GI:116489745  
KEYWORDS .  
SOURCE Schizochytrium sp. ATCC 20888  
ORGANISM [Schizochytrium sp. ATCC 20888](#)  
Eukaryota; Stramenopiles; Labyrinthulomycetes; Thraustochytriaceae;  
Schizochytrium.



С  
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И  
С



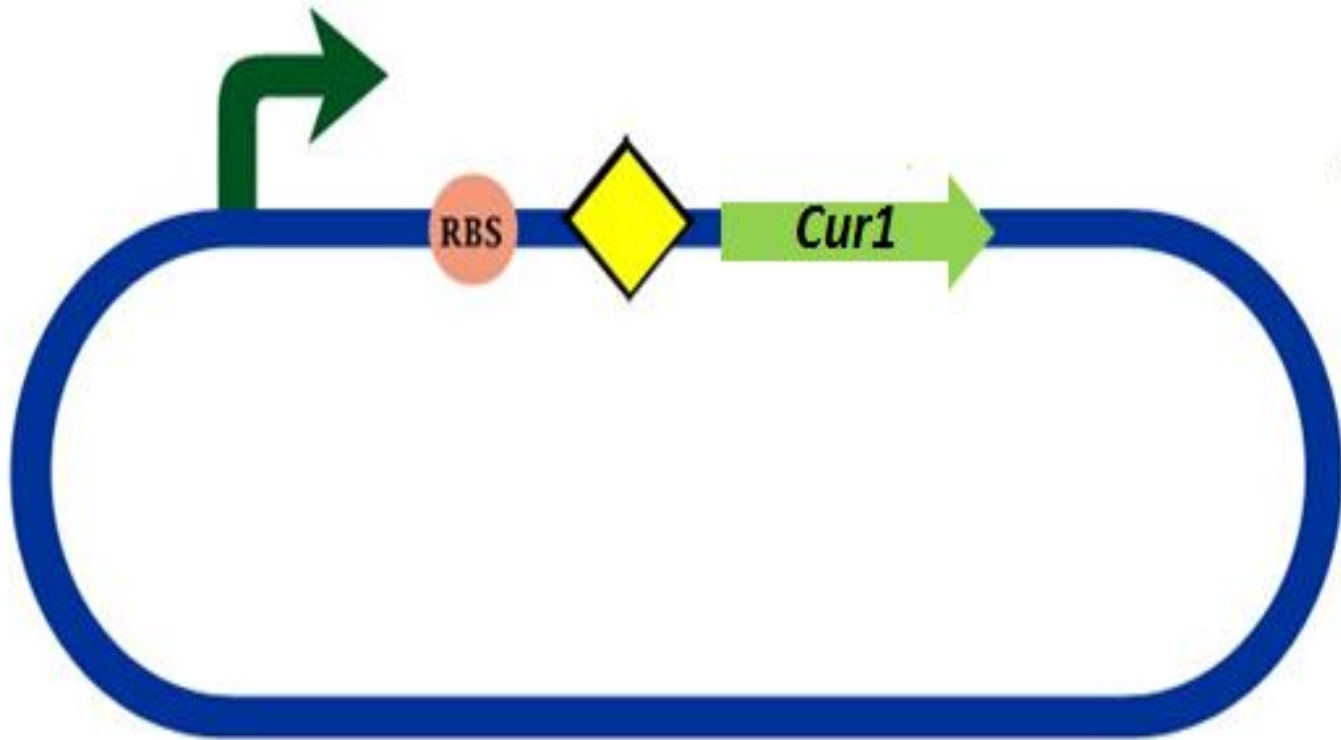


*Curculigo  
latifolia*





# curcULin





curculin

*accession number* **AB181490.1**

## Curculigo latifolia Cur mRNA for curculin, complete cds

GenBank: AB181490.1

[GenBank](#) [Graphics](#)

>gi|51555853|dbj|AB181490.1| Curculigo latifolia Cur mRNA for curculin, complete cds

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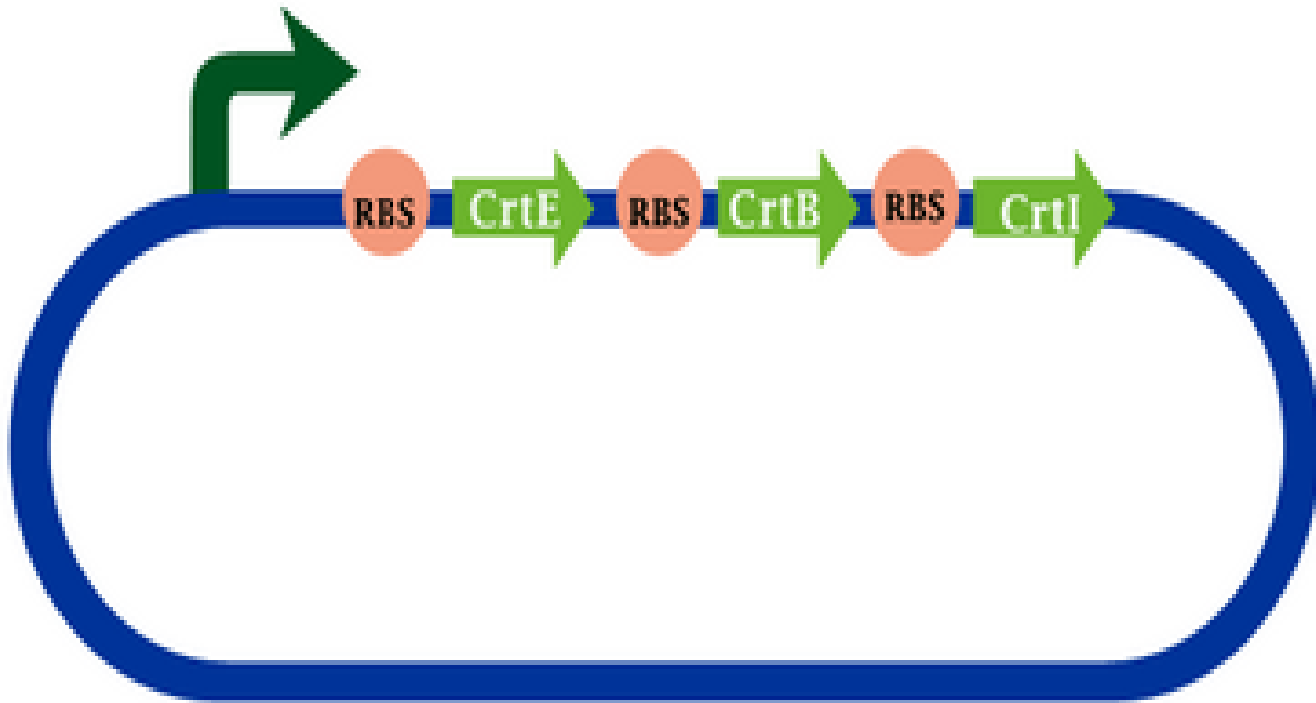
pewarna



aroma



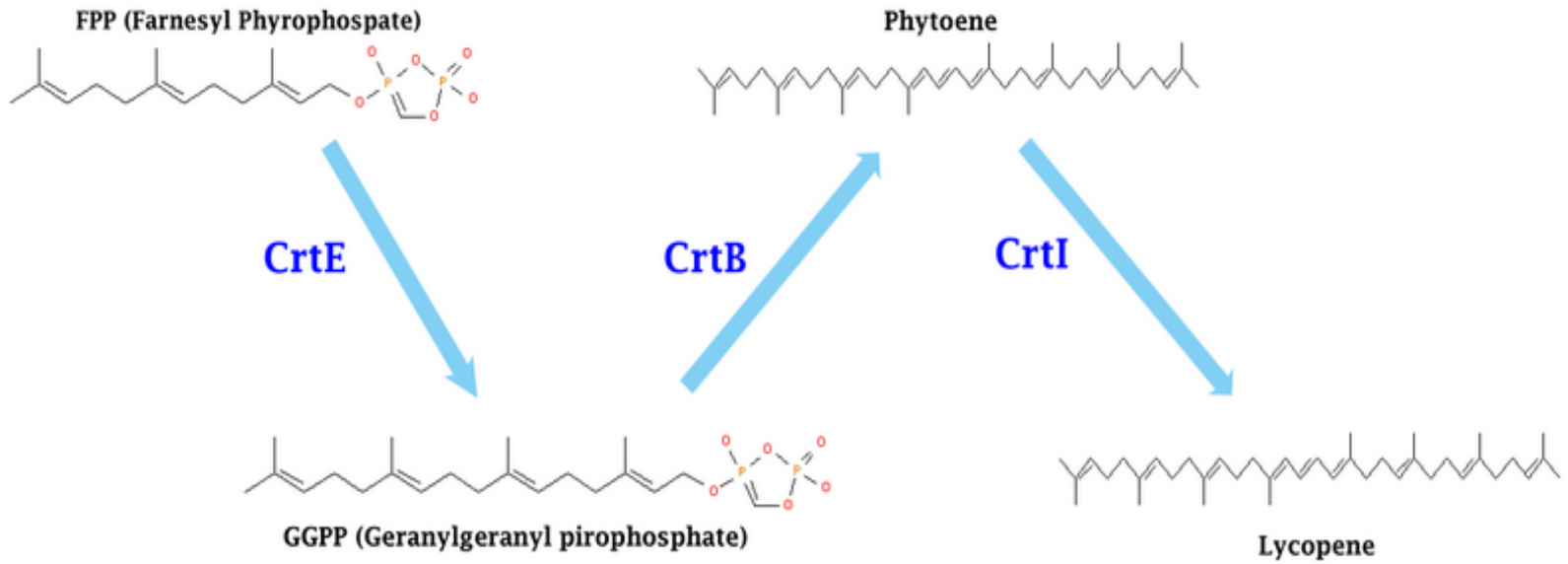
# PEWARNA MERAH





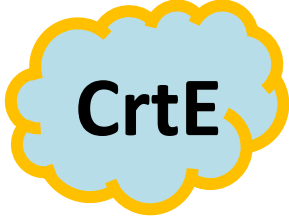


# PEWARNA MERAH





# PEWARNA MERAH



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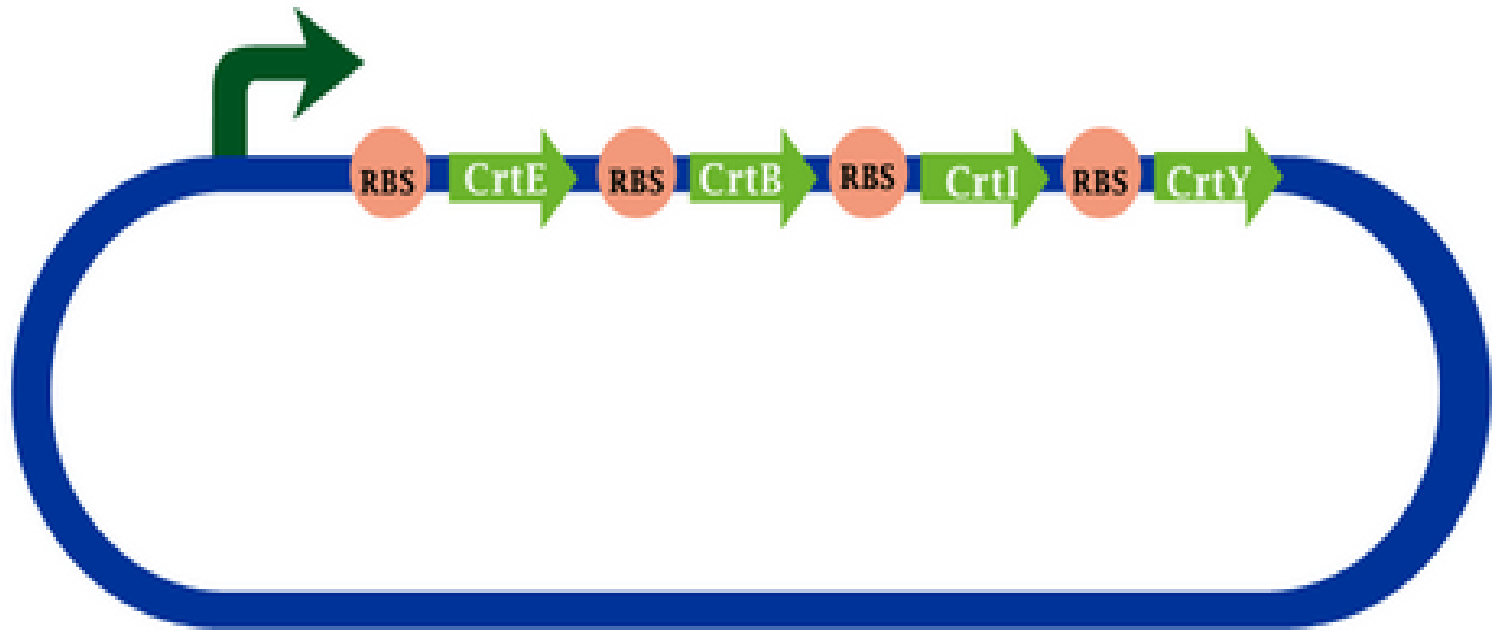
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>BBa\_K118003 Part-only sequence (1482 bp)  
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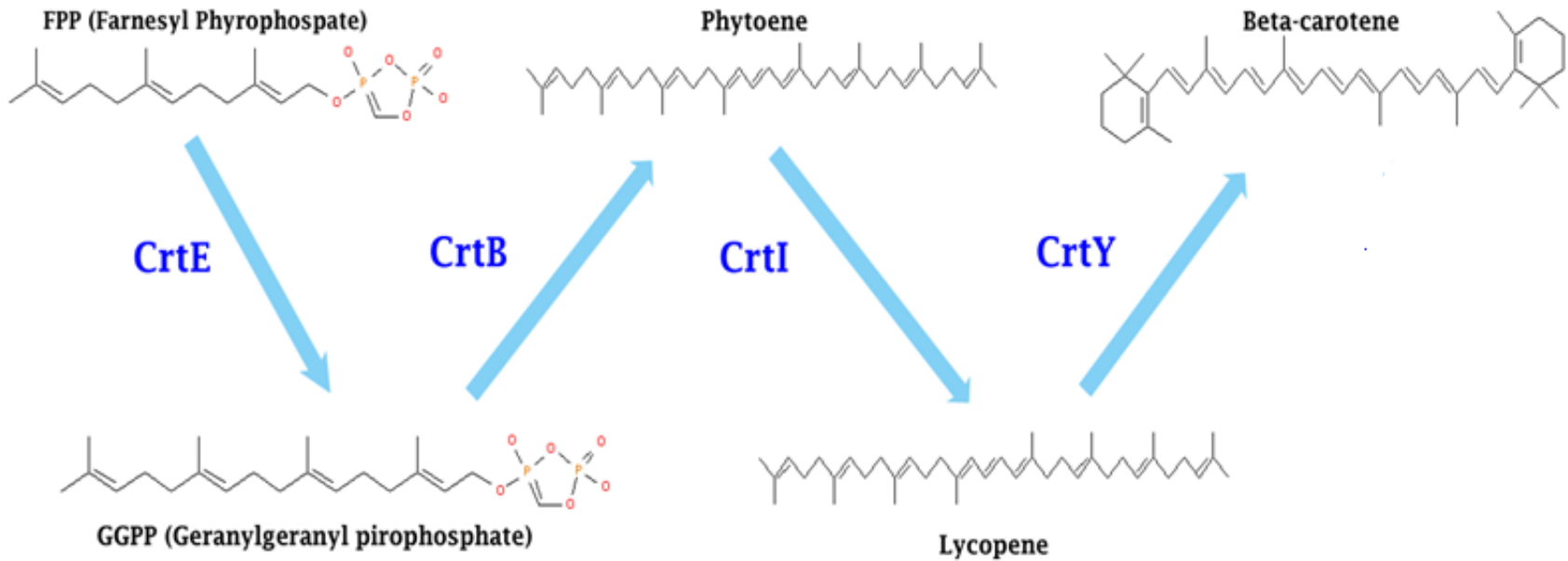


# peWARna oraNYe





# PEWARNA ORANYE







peWarna

orange

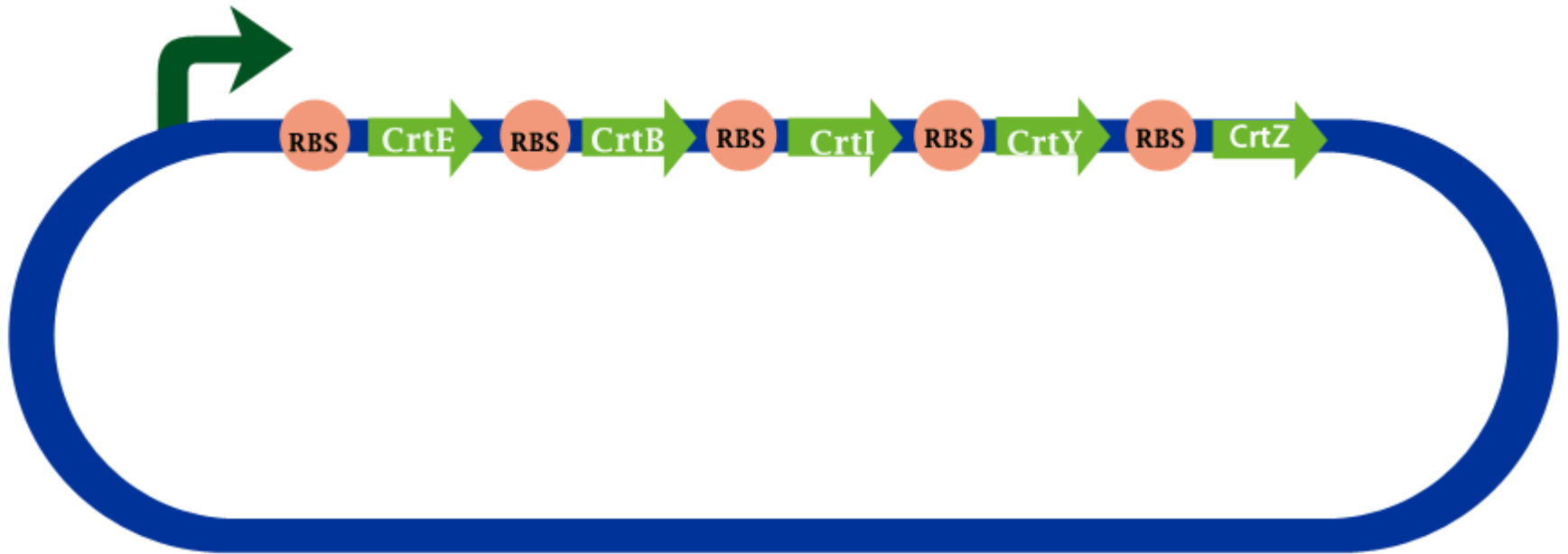


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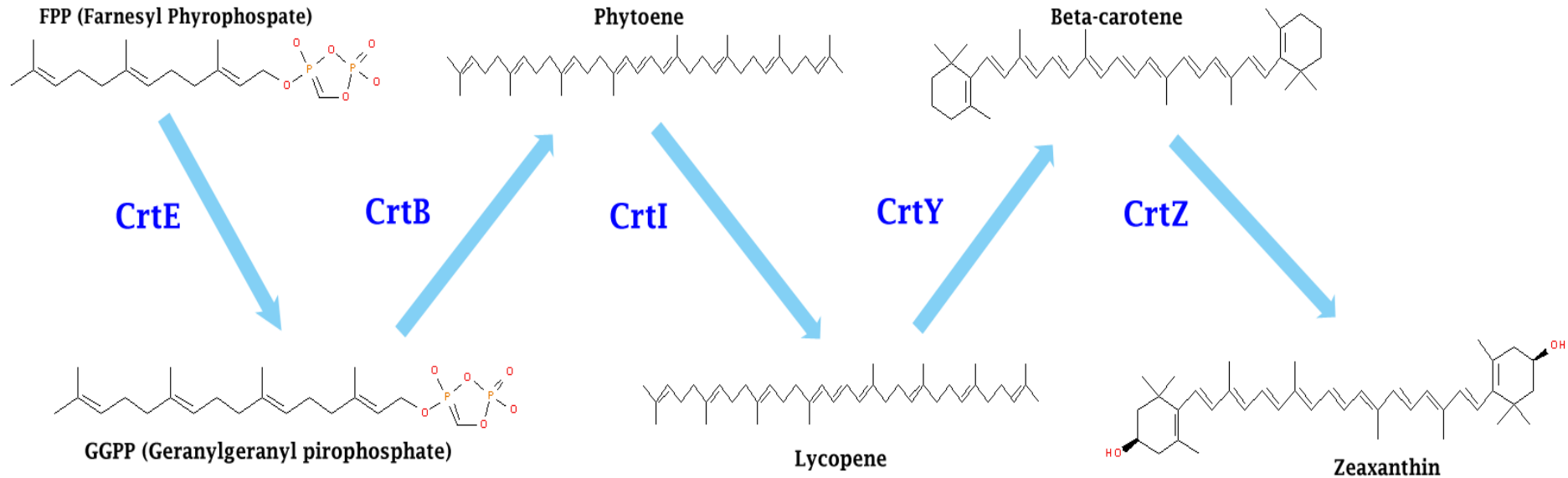


# PEWARNA KUNING





# PEWARNA KUNING





# PEWARNA KUNING

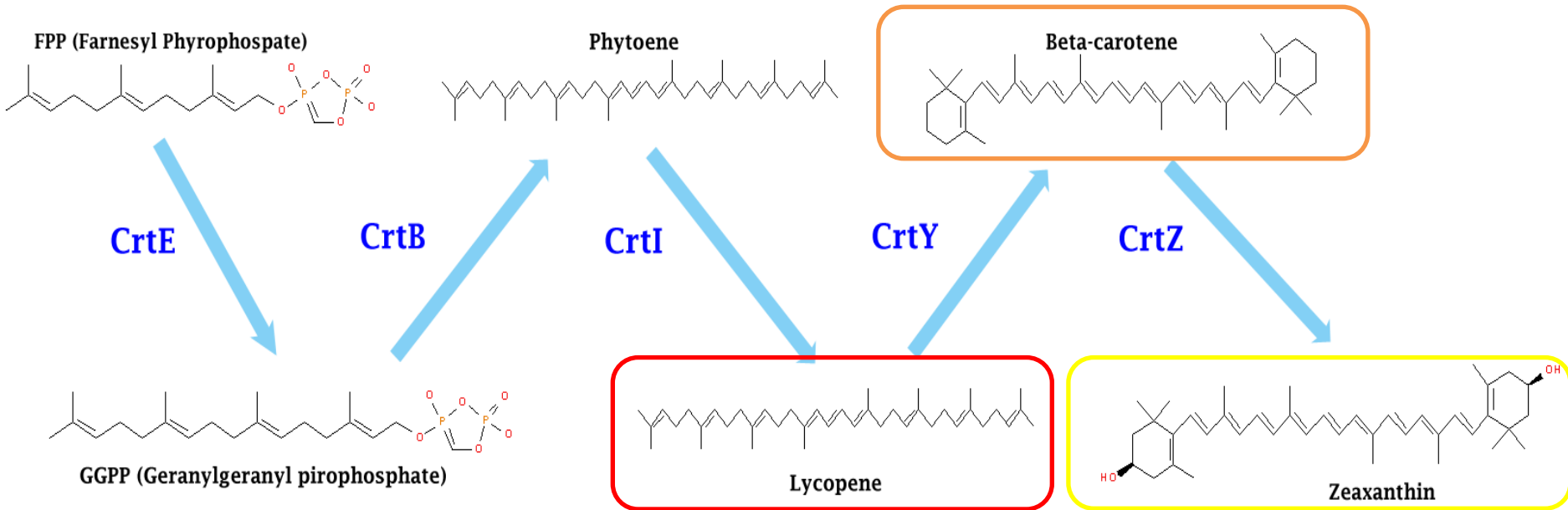


>BBa\_K1033110 Part-only sequence (1110 bp)

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# MERAH ORANYE KUNING







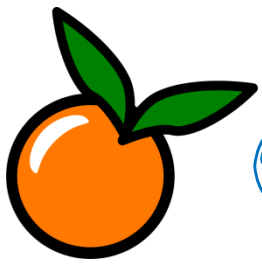
# PEWARNA LAIN

ungu

**BBa\_K274002**

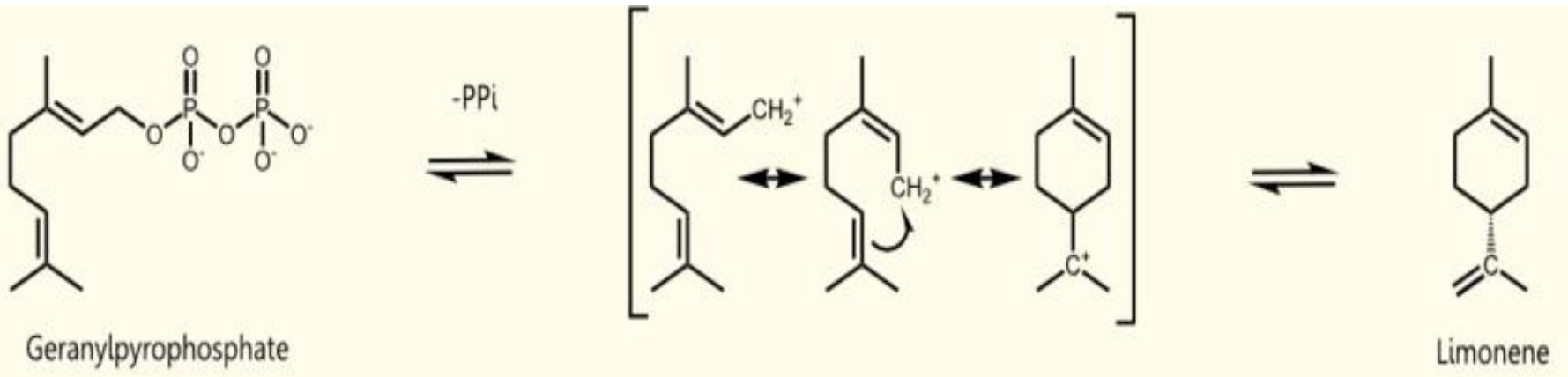
hijau

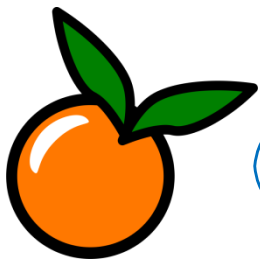
**BBa\_K274003**



# aroma Limonene

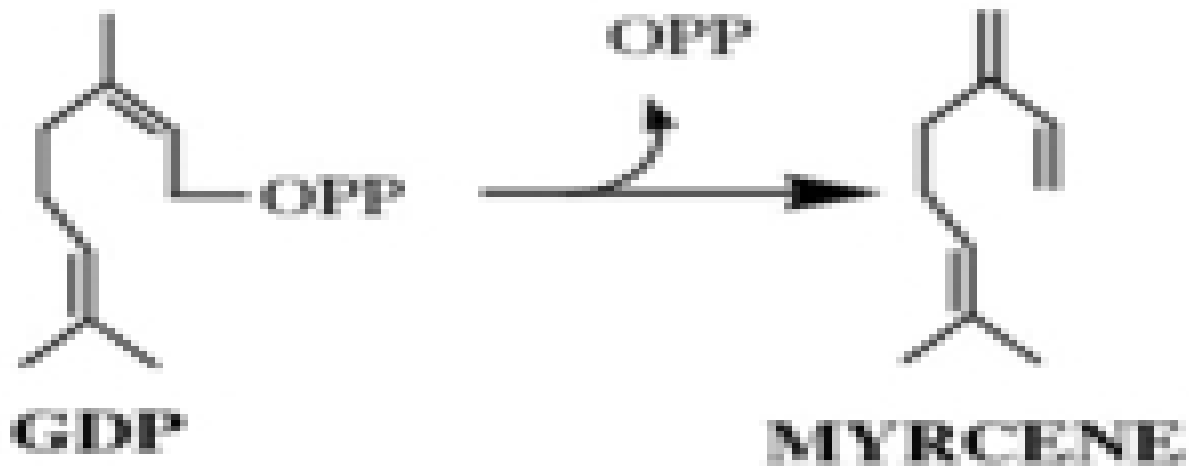
## *Limonene-1-synthase* BBa\_K801061

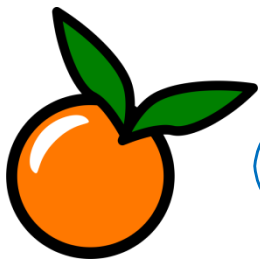




aroma Myrcene

*Myrcene synthase*  
BBa\_K1148010

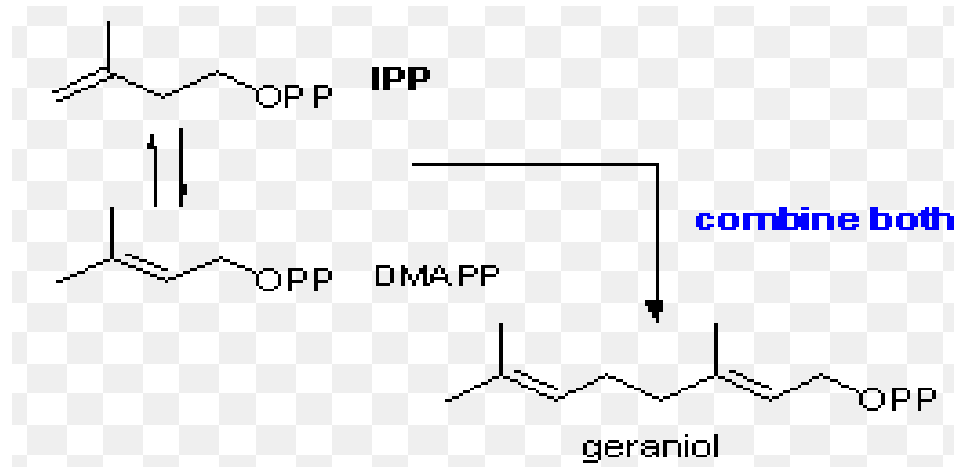




# aroma geraniol

*monoterpenyl-diphosphatase*

BBa\_K1148011



daftar

Pustaka







# daftar PUSTAKA

Hauvermale, et al. 2006. *Fatty Acid Production in Schizochytrium sp.: Involvement of a Polyunsaturated Fatty Acid Synthase and a Type I Fatty Acid Synthase*. Lipids, Vol. 41, no. 8.

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**"Don't be dumb"**  
**"You're smart!"**

