

Design AarI primers

Adapted from Sergio Peisajovich

MCS for iGEM pRS315 acceptor vectors:

```
GGGCCC_CTCGAGggagcaaggcaggtggacaagaggagtccccgggagctggaactccc  
acctgcaaacattgcgGGATCCTGAGTAAATAAGCGGCCGCGCGAATTTCTTATGATTTAT  
GATTTTTATTATTAAATAAGTTATAAAAAAAAAATAAGTGTATACAAATTTAAAGTGACT  
CTTAGGTTTTAAAACGAAAATTCTTATTCTTGAGTAACTCTTTCCTGTAGGTCAGGTTG  
CTTCTCAGGTATAGCATGAGGTCGCTCTTATTGACCACACCGAGCTC
```

Restriction sites (yellow) are in the following order (AarI recognition is bolded): PspOMI, XhoI, XmaI, BamHI, NotI and SacI (the AarI sites "A" and "D" are marked in red).

In Green: 3 STOPS in different frames.

In Purple: Adh-Terminator

Promoters (including ATG) are between PspOMI and XhoI.

A four part ligation would look like this:

(colors different, matching that in the text preceding the sequence)

1- **ATG**-**XhoI**-**"A"** and 2 adaptor bases: **ATGCTCGAGGGAGCT**

2- 7 Adaptor bases, followed by **"B"** and another adaptor base: **GGTAGTTCCTA**

3- 4 Adaptor bases, followed by **"C"** followed by another adaptor base: **GGTAGCGAT**

7- **STOP**, followed by **"D"** (TGCG), followed by **BamHI**, 3 STOPS in three different frames, then **NotI**, the Adh terminator and **SacI**.

Example of primer design for a three-part ligation
(acceptor and two donors specifying protein domains for
fusion)

Add these sequences to your primers:

AB part (amino terminal part of protein fusion)

FOR 5' : CACCTGCAACAGGAGCT-YOUR PRIMER-3'

REV 5' : CACCTGCCTTGAGGGA ACTACC--3'

BD part (carboxy terminal part of protein fusion)

FOR 5' : CACCTGCAACACCCTA-YOUR PRIMER-3'

REV 5' : CACCTGCCTTGCGCATT A-YOUR PRIMER-3'