



```
CGGTAACCCCGCTTATTAAGAAGCATTCTGTAACAAAGCGGGACCAAGCCATGACAAAAACGCGTAACAAAAGTG
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GCCATTGGGGCGAATAATTTTCGTAAGACATTGTTTCGCCCTGGTTTCGGTACTGTTTTTGCGCATTGTTTTTCAC
```

150

araBAD promoter

```
TCTATAATCACGGCAGAAAAGTCCACATTGATTATTTGCACGGCGTCACACTTTGCTATGCCATAGCATTTTTTAT
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
AGATATTAGTGCCGTCTTTTCAGGTGTAACATAAAGCTGCCGCAAGTGTGAAACGATACGGTATCGTAAAAATA
```

225

araBAD promoter

```
CCATAAGATTAGCGGATCCTACCTGACGCTTTTTATCGCAACTCTCTACTGTTTCTCCATACCCGTTTTTTGGGC
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GGTATCTAATCGCCTAGGATGGACTGCGAAAAATAGCGTTGAGAGATGACAAAGAGGTATGGGCAAAAAACCCG
```

300

araBAD promoter

NcoI

NheI

```
TACACAGGAGGAATTAACCATGGGGGGTTCATCATCATCATCATCATGGTATGGCTAGCATGACTGGTGGACAG
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
ATTGTCCTCCTTAATTGGTACCCCCAAGAGTAGTAGTAGTAGTAGTACCATACCGATCGTACTGACCACCTGTG
```

375

```
1      5      1      5
His His His His His His Gly Met Ala Ser Met Thr Gly Gly Gln
6xHis ----- T7 tag (gene 10 leader)
```

```
CAAATGGGTCGGGATCTGTACGACGATGACGATAAGGATCGATGGGGATCCGAGCTCGAGATCTGCAGCTGGTAC
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
GTTTACCCAGCCCTAGACATGCTGCTACTGCTATTTCCTAGCTACCCCTAGGCTCGAGCTCTAGACGTCGACCATG
```

450

```
10      1      5
Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Lys Asp Arg Trp Gly Ser Glu Leu Glu Ile Cys Ser Trp Tyr
T7 tag (gene 10 leader) ----- Xpress(TM) tag ----- (in frame with Xpress(TM) tag) -----
```

T7 tag (gene 10 leader)

MCS

EcoRI BstBI HindIII

CATATGGGAATTCGAAGCTTGGCTGTTTTGGCGGATGAGAGAAGATTTTCAGCCTGATACAGATTAATCAGAAC
GTATACCCTTAAGCTTCGAACCGACAAAACCGCCTACTCTCTTCTAAAAGTCGGACTATGTCTAATTTAGTCTTG
His Met Gly Ile Arg Ser Leu Ala Val Leu Ala Asp Glu Arg Arg Phe Ser Ala *
----- (in frame with Xpress(TM) tag) ----->

525

MCS

GCAGAAGCGGTCTGATAAAACAGAATTTGCCTGGCGGCAGTAGCGCGGTGGTCCCACCTGACCCCATGCCGAAC
CGTCTTCGCCAGACTATTTTGTCTTAAACGGACCGCGTCATCGCGCCACCAGGGTGGACTGGGGTACGGCTTGA

600

CAGAAGTGAAACGCCGTAGCGCCGATGGTAGTGTGGGGTCTCCCATGCGAGAGTAGGGAAGTCCAGGCATCAA
GTCTTCACTTTGCGGCATCGCGGCTACCATCACACCCAGAGGGGTACGCTCTCATCCCTTGACGGTCCGTAGTT

675

rrnB T1 terminator

ATAAAACGAAAGGCTCAGTCGAAAGACTGGGCCTTTGTTTTATCTGTTGTTTGTTCGGTGAACGCTCTCCTGAGT
TATTTTGTCTTCCGAGTCAGCTTTCTGACCCGGAAGCAAATAGACAACAACAGCCACTTGCGAGAGGACTCA

750

rrnB T1 terminator

AGGACAAATCCGCCGGGAGCGGATTTGAACGTTGCGAAGCAACGGCCCGGAGGGTGGCGGGCAGGACGCCCGCCA
TCCTGTTTAGGCGGCCCTCGCCTAAACTTGCAACGCTTCGTTGCCGGGCCTCCACC GCCCGTCTGCGGGCGGT

825

rrnB T1 terminator