S2 Data. FASTA format sequence information of the modified *sh*ble screening vector.

LOCUS Exported 6333 bp ds-DNA circular SYN

DEFINITION synthetic circular DNA

ACCESSION .

VERSION .

KEYWORDS .

SOURCE synthetic DNA construct

ORGANISM synthetic DNA construct

REFERENCE 1 (bases 1 to 6333)

AUTHORS Thomas Baier

FEATURES Location/Qualifiers

source 1..6333

/organism="synthetic DNA construct"

/mol\_type="other DNA"

source 2593..3355

/organism="synthetic DNA construct"

/mol\_type="other DNA"

promoter 572..838

/label=HSP70Ap promoter

/label=HSP70Ap

promoter 845..1065

/label=RBCS2p promoter

/label=RBCS2p

transit\_peptide join(1066..1073,1219)

/label=RBCS2ORF

intron 1074..1218

/label=rbcS2i1

CDS 1247..1258

/codon\_start=1

/product="Factor Xa recognition and cleavage site"

/label=Factor Xa site

/translation="IEGR"

CDS join(1259..1562,1892..2295)

/codon\_start=1

/label=mRuby2

/translation="VSKGEELIKENMRMKVVMEGSVNGHQFKCTGEGEGNPYMGTQTMRIKVIEGGPLPFAFDILATSFMYGSRTFIKYPKGIPDFFKQSFPEGFTWERVTRYEDGGVVTVMQDTSLEDGCLVYHVQVRGVNFPSNGPVMQKKTKGWEPNTEMMYPADGGLRGYTHMALKVDGGGHLSCSFVTTYRSKKTVGNIKMPGIHAVDHRLERLEESDNEMFVVQREHAVAKFAGLGGGMDELYK"

intron 1563..1891

/label=rbcS2i2

CDS 2296..2307

/codon\_start=1

/product="Factor Xa recognition and cleavage site"

/label=Factor Xa site

/translation="IEGR"

CDS 2320..2343

/codon\_start=1

/product="peptide that binds Strep-Tactin(R), an engineered form of streptavidin"

/label=Strep-Tag II

/translation="WSHPQFEK"

misc\_feature 2347..2580

/label=3'UTR

promoter 2593..3355

/label=PSAD promoter

CDS 3389..3766

/codon\_start=1

/label=ble

/translation="AKLTSAVPVLTARDVAGAVEFWTDRLGFSRDFVEDDFAGVVRDDVTLFISAVQDQDQVVPDNTLAWVWVRGLDELYAEWSEVVSTNFRDASGPAMTEIGEQPWG

REFALRDPAGNCVHFVAEEQD"

misc\_feature 3776..4014

/label=3'UTR

/label=3'UTR(1)

rep\_origin complement(4474..5062)

/direction=LEFT

/label=ori

/note="high-copy-number ColE1/pMB1/pBR322/pUC origin of

replication"

CDS complement(5233..6093)

/codon\_start=1

/gene="bla"

/product="beta-lactamase"

/label=AmpR

/note="confers resistance to ampicillin, carbenicillin, and related antibiotics"

/translation="MSIQHFRVALIPFFAAFCLPVFAHPETLVKVKDAEDQLGARVGYIELDLNSGKILESFRPEERFPMMSTFKVLLCGAVLSRIDAGQEQLGRRIHYSQNDLVEYSPVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTTIGGPKELTAFLHNMGDHVTRLDRWEPELNEAIPNDERDTTMPVAMATTLRKLLTGELLTLASRQQLIDWMEADKVAGPLLRSA

LPAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIYTTGSQATMDERNRQIAEIGASLIKHW"

promoter complement(6094..6198)

/gene="bla"

/label=AmpR promoter

rep\_origin complement(join(6225..6333,1..347))

/direction=LEFT

/label=f1 ori

/note="f1 bacteriophage origin of replication; arrow

indicates direction of (+) strand synthesis"

ORIGIN

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