## Supplementary Table - Promoter-gene-terminator combinations in the NeoChrs.

Promoters, genes or terminators originate from *S. cerevisiae* unless indicated by: *Ec*= *Escherichia coli*, *At*= *Arabidopsis thaliana*, *Rc= Rhodobacter capsulatus*, *Gh=* *Gerbera hybrida* *Se*= *Saccharomyces eubayanus*, *Sk*= *Saccharomyces kudriavzevii*, *co= codon optimized.* Watermarked *S. cerevisiae* genes1 are indicated with an \*.

|  |  |  |
| --- | --- | --- |
| Promoter | ORF | Terminator |
| Genes from glycolysis and ethanolic fermentation are expressed from their native promoters and terminators | | |
| *pFBA1* | *FBA1\** | *tFBA1* |
| *pPGM1* | *PGM1\** | *tPGM1* |
| *pHXK2* | *HXK2\** | *tHXK2* |
| *pPDC1* | *PDC1\** | *tPDC1* |
| *pPFK1* | *PFK1\** | *tPFK1* |
| *pPFK2* | *PFK2\** | *tPFK2* |
| *pPGK1* | *PGK1\** | *tPGK1* |
| *pPYK1* | *PYK1\** | *tPYK1* |
| *pTPI1* | *TPI1\** | *tTPI1* |
| *pADH1* | *ADH1\** | *tADH1* |
| *pTDH3* | *TDH3\** | *tTDH3* |
| *pENO2* | *ENO2\** | *tENO2* |
| *pPGI1* | *PGI1\** | *tPGI1* |
| Genes from the pentose phosphate pathway are expressed from their native promoters and terminators | | |
| *pZWF1* | *ZWF1\** | *tZWF1* |
| *pTKL1* | *TKL1\** | *tTKL1* |
| *pGND1* | *GND1\** | *tGND1* |
| *pRKI1* | *RKI1\** | *tRKI1* |
| *pTAL1* | *TAL1\** | *tTAL1* |
| *pRPE1* | *RPE1\** | *tRPE1* |
| *pSOL3* | *SOL3\** | *tSOL3* |
| Auxotrophic markers are expressed from their native promoters and terminators | | |
| *pHIS3* | *HIS3* | *tHIS3* |
| *pURA3* | *URA* | *tURA3* |
| Fluorescent markers are expressed from *S. cerevisiae* promoters and terminators. Promoters identified from 2 | | |
| *pCCW12* | *mRuby2* | *ENO1* |
| *pTEF2* | *mTurquoise2* | *tSSA1* |
| Genes from the *E.coli* shikimate pathway are expressed from *S. cerevisiae* promoters and terminators. Promoters identified from 2-4 | | |
| *pRPL3* | *coEcaroA* | *tSOL4* |
| *pRPL25* | *coEcaroD* | *tGPH1* |
| *pRPP0* | *coEcaroE* | *tCYC1* |
| *pHHF1* | *coEcaroG*p150L | *tTEF1* |
| *pHTB2* | *coEcaroL* | *tPGM2* |
| *pRPL10* | *coEctyrAM53I A354V* | *tGDB1* |
| *pCWP2* | *coEctyrB* | *tGLC3* |
| *pHHF2* | *coEcaroB* | *tTEF2* |
| *pRPL8A* | *coEcaroC* | *tGPD2* |
| *pRPL18B* | *coEcpheAT326P* | *tGSY2* |
| One gene from the anthocyaninpathway is expressed from a *S. cerevisiae* promoter and terminator. Promoter identified from 2-4 | | |
| *pTEF1* | *coAtCHS3* | *tMDH1* |
| Genes from the anthocyanin pathway are expressed from a *S. eubayanus* and *S. kudriavzevii* promoters 5 and *S. cerevisiae* terminators*.* | | |
| *pSePDC1* | *AtPAL1* | *tLAT1* |
| *pSeGPM1* | *coRcTAL1* | *tCIT1* |
| *pSkADH1* | *AtCHI1* | *tSDH4* |
| *pSeFBA1* | *coAtC4H* | *tADH3* |
| *pSkTDH3* | *coAtF3H* | *tSDH3* |
| *pSePGK1* | *coGhDFR* | *tACO1* |
| *pSeENO2* | *coAtANS* | *tFUM1* |
| *pSePYK1* | *coAt3GT* | *tDIC* |