

Table S1. List of Primers used for the generation and sequencing of heterodimeric constructs.

Primer	Sequence (5' to 3')
H111N	GTCTATCTG <u>AAC</u> ATCTTCCG
G158W	CCAGATGTCCTTCTGG <u>TGG</u> GCCACCGTGATCACCG
H198N	TTCTCGCTG <u>AAC</u> TACCTGCT
Linker	CGGCACGAAAACGGTCGTGGCAGAG <u>GCGTCGATCGCCGGCGGCCGCTA</u> AGTCGACGGGAAAGGACAGTGAC (Linker H1 for pCT) GACGAAACCACCATCCAGCTCGGGT <u>GCGGCCGCACCGCATCGGGCCCGTCCG</u> GAATCCCTCACGACCATTACG (Linker H2 for pNT)
Strep-tag	CGTGGCAGAGATTGAGGGGCGCGGGT <u>TGGAGCCACCCGCAGTTCGAGAA</u> <u>A</u> TAAGTCGACGGGAAAGGACAGTGAC
Sequencing- <i>fbcB</i>₁	CCACGGATCGCACTACGAC (forward)(upstream of <i>fbcB</i> ₁) GGCCGCCGCGCATCGACG (reverse)(within linker)
Sequencing- <i>fbcB</i>₂	GTCGATCGCCGGCGGCCGCA (forward)(within linker) TTTCTCGAACTGCGGGTGGC (reverse) (in strep tag)
Unbiased size check*	GTGTCCAACGCAGAAGATCA (forward)(in <i>fbcF</i> , upstream of <i>fbcB</i> or <i>fbcB</i> ₁) TGCGCAGACCTCGGTATAGACCTG (reverse)(in <i>fbcC</i> , downstream of <i>fbcB</i> or <i>fbcB</i> ₂)

*The sequence of these primers are unbiased with respect to selection of *cyt b* encoding spans of heterodimeric or homodimeric constructs.

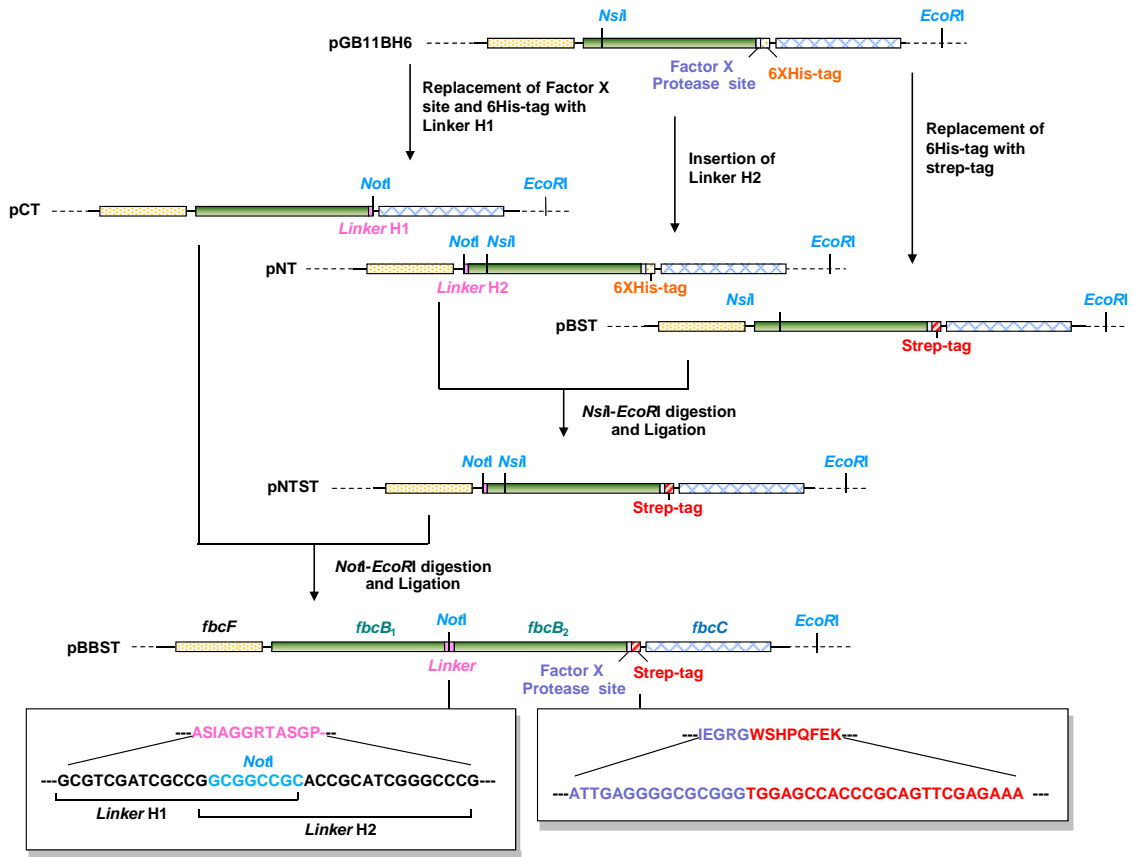


Fig. S1. Schematic showing construction of heterodimeric expression system of *fbc* operon in *R. sphaeroides*.