

Additional file 5-Strategies for constructing the recombinant plasmids.



**Figure S5.** Strategies for constructing the recombinant plasmids of pUC18-*nox-2* and pXZF-308. The *nox-2* gene from *S. pneumoniae* encoding a water-forming NADH oxidase was amplified from pNOX2 by polymerase chain reaction. The *nox-2* gene fragment was then inserted into the restriction sites of *Kpn*I and *Pst*I in pUC18, yielding the recombinant plasmid pUC18-*nox-2*. Then, the *nox-2* gene fragment was digested by *Kpn*I and *Pst*I, and inserted into the *Kpn*I-*Pst*I site of an expressing vector pDK7, yielding the recombinant strain pXZF-308.