The Genetic Toolbox for *Acidovorax temperans*

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Abstract

Environmental isolates belonging to the genus *Acidovorax* play a crucial role in degrading a wide range of pollutants. Studies on *Acidovorax* are currently limited for many species due to the lack of genetic tools. Here, we described the use of the replicon from a small, cryptic plasmid indigenous to *Acidovorx temperans* strain CB2, to generate stably maintained shuttle vectors. In addition, we have developed a scarless gene knockout technique, as well as establishing green fluorescent protein (GFP) reporter and complementation systems. Taken collectively, these tools will improve genetic manipulations in the genus *Acidovorax*.

Keywords: Indigenous Plasmid, Shuttle Vector, Recombination, Counterselectable Marker, Scarless, *gfp*