

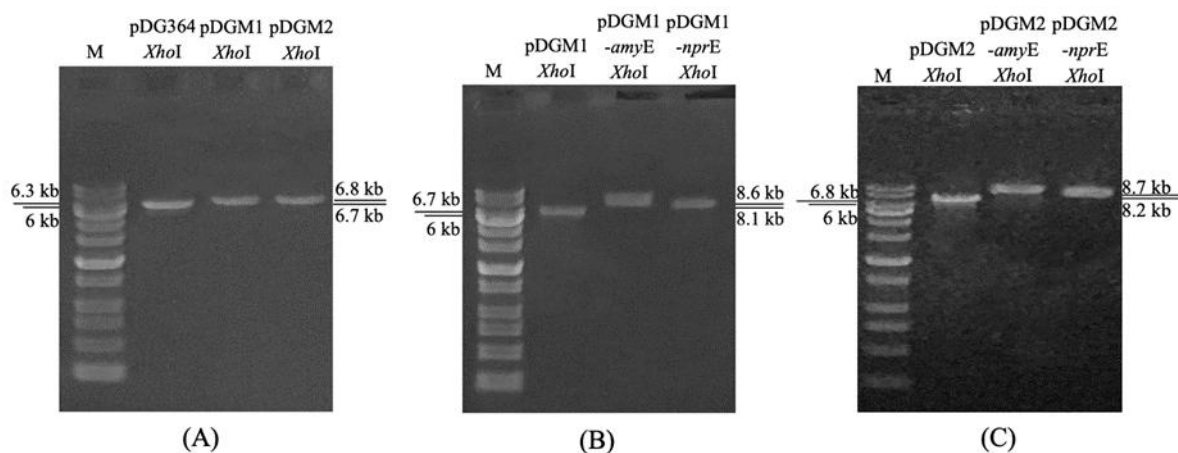


Figure S1. Agarose gel (1%) electrophoresis of plasmids digested with *XhoI*. **(A):** Cloning of M1, M2 into pDG364: vector pDG364 (6.3 kb), pDGM1 (6.7 kb), pDGM2 (6.8 kb). **(B):** Cloning of *amyE* and *nprE* into pDGM1: pDGM1 (6.7 kb), pDGM1-*amyE* (8.6 kb) and pDGM1-*nprE* (8.1 kb). **(C):** Cloning of *amyE* and *nprE* into pDGM2: pDGM2 (6.8 kb), pDGM2-*amyE* (8.7 kb) and pDGM2-*nprE* (8.2 kb) (M: 1 kb DNA ladder)

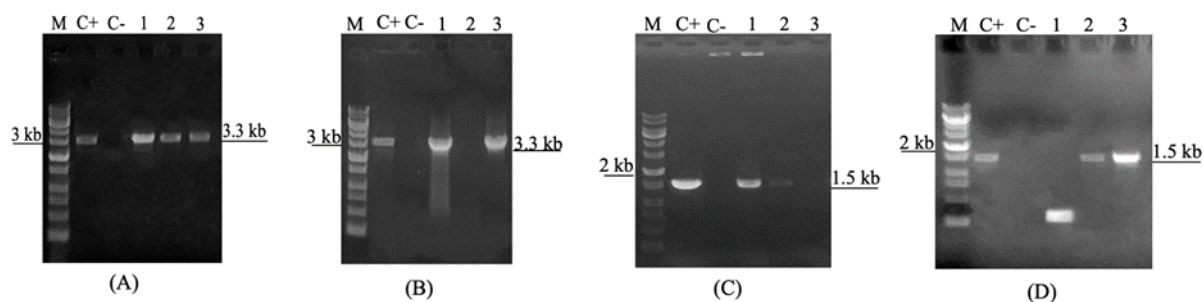


Figure S2. Agarose gel (1%) electrophoresis of PCR products from PY79 transformants' genomic DNA carrying **(A)** M1-*amyE*, **(B)** M2-*amyE*, **(C)** M1-*nprE*, and **(D)** M2-*nprE* (M: DNA 1 kb ladder, C+: Isolated plasmid used for the transformation, C-: PY79 genomic DNA)

Table S1. Halo zone diameter formed by starch hydrolysis after 24 hours

Strain	ΔR (mm) of halo zones on 1% (w/v) starch NA plates					
	With 5 μ g/mL chloramphenicol			No chloramphenicol		
	Inner	Outer	ΔR	Inner	Outer	ΔR
PY79	-	-	-	7.27 $\pm$ 0.12	12.50 $\pm$ 0.08	5.23 $\pm$ 0.05
PY-M1- <i>amyE</i>	7.27 $\pm$ 0.05	20.20 $\pm$ 0.08	12.93 $\pm$ 0.12	7.47 $\pm$ 0.12	20.13 $\pm$ 0.17	12.67 $\pm$ 0.08
PY-M2- <i>amyE</i>	8.57 $\pm$ 0.05	27.63 $\pm$ 0.17	19.07 $\pm$ 0.12	8.27 $\pm$ 0.05	29.17 $\pm$ 0.05	20.90 $\pm$ 0.08

Table S2. Secreted α -amylase activity of *B. subtilis* strains at various time points

Strain	α -Amylase activity (U/L)		
	24 h	36 h	48 h
PY79	3788.0±68.6	4152.7±87.3	4779.0±99.9
PY-M1- <i>amyE</i>	4799.0±79.3	5475.3±67.8	6254.3±76.5
PY-M2- <i>amyE</i>	7131.0±110.5	9247.3±145.9	12564.0±177.8

Table S3. Halo zone diameter formed by gelatin hydrolysis after 24 hours

Strain	Diameter (mm) of halo zones on 1% (w/v) gelatin NA plates					
	With 5 μ g/mL chloramphenicol			No chloramphenicol		
	Inner	Outer	ΔR	Inner	Outer	ΔR
PY79	-	-	-	11.03±0.09	15.00±0.08	3.97±0.12
PY-M1- <i>nprE</i>	8.97±0.17	14.00±0.08	5.03±0.21	9.97±0.17	14.97±0.12	5.00±0.14
PY-M2- <i>nprE</i>	8.97±0.12	14.03±0.09	5.07±0.05	10.07±0.12	15.10±0.08	5.03±0.05

Table S4. Secreted protease activity of *B. subtilis* strains at different time points

Strain	Protease activity (U/L)		
	24 h	36 h	48 h
PY79	123.0±33.3	140.0±10.2	114.1±7.3
PY-M1- <i>nprE</i>	238.9±46.3	286.6±28.3	217.1±49.4
PY-M2- <i>nprE</i>	286.6±45.7	339.4±46.7	301.6±26.1