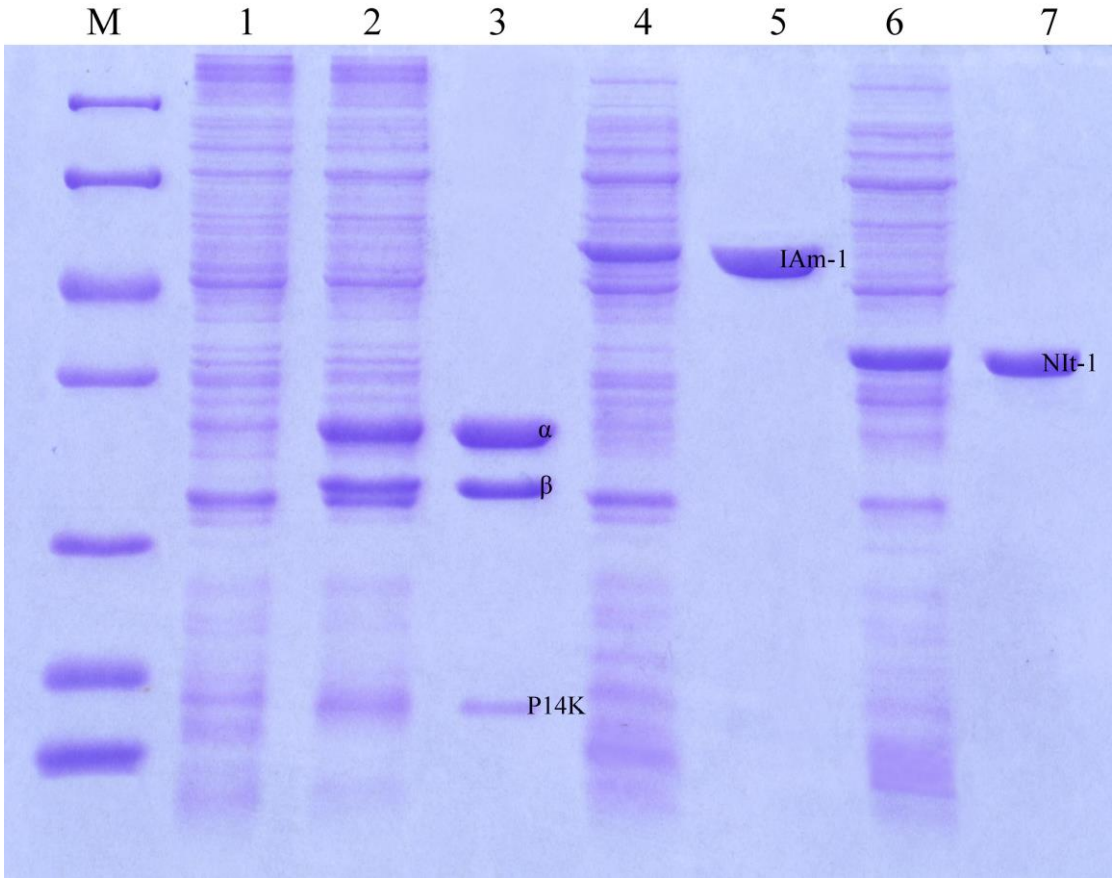

FIG S1. SDS-PAGE of the *V. boronicumulans* CGMCC 4969 nitrile-converting enzymes NHase, IamA and NitA overexpressed in *Escherichia coli* and the purified target proteins. Lanes 1, 2, 4 and 6 show crude extracts of *E. coli* Rosetta (DE3) overexpressing plasmids pET28a, pET28a-NHase, pET28a-*iamA* and pET28a-*nitA*, respectively; Lanes 3, 5 and 7 show purified NHase, IamA and NitA, respectively; Lane M: standard protein markers (116.0, 66.2, 45.0, 35.0, 25.0, 18.4, and 14.4 kDa from top to bottom). The overexpressed NHase had a 6×histidine tag at the N-terminus of the α-subunit and the C-terminus of the activator, and the overexpressed IamA and NitA respectively had 6×histidine tags at their N-termini.

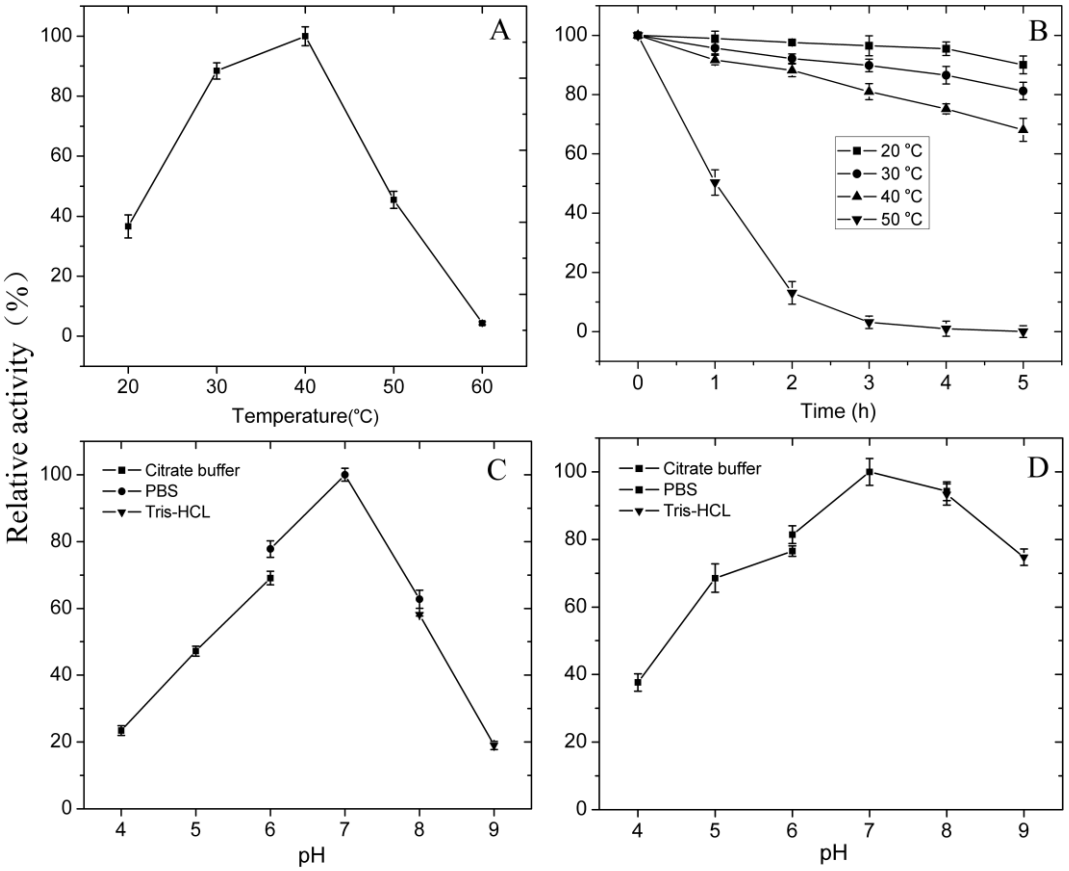

FIG S2. Enzymatic characterization of the purified recombinant NHase.

A, Effects of temperature on the activity of NHase; B, effects of temperature on the stability of NHase; C, effects of pH on the activity of NHase; D, effects of pH on the stability of NHase.

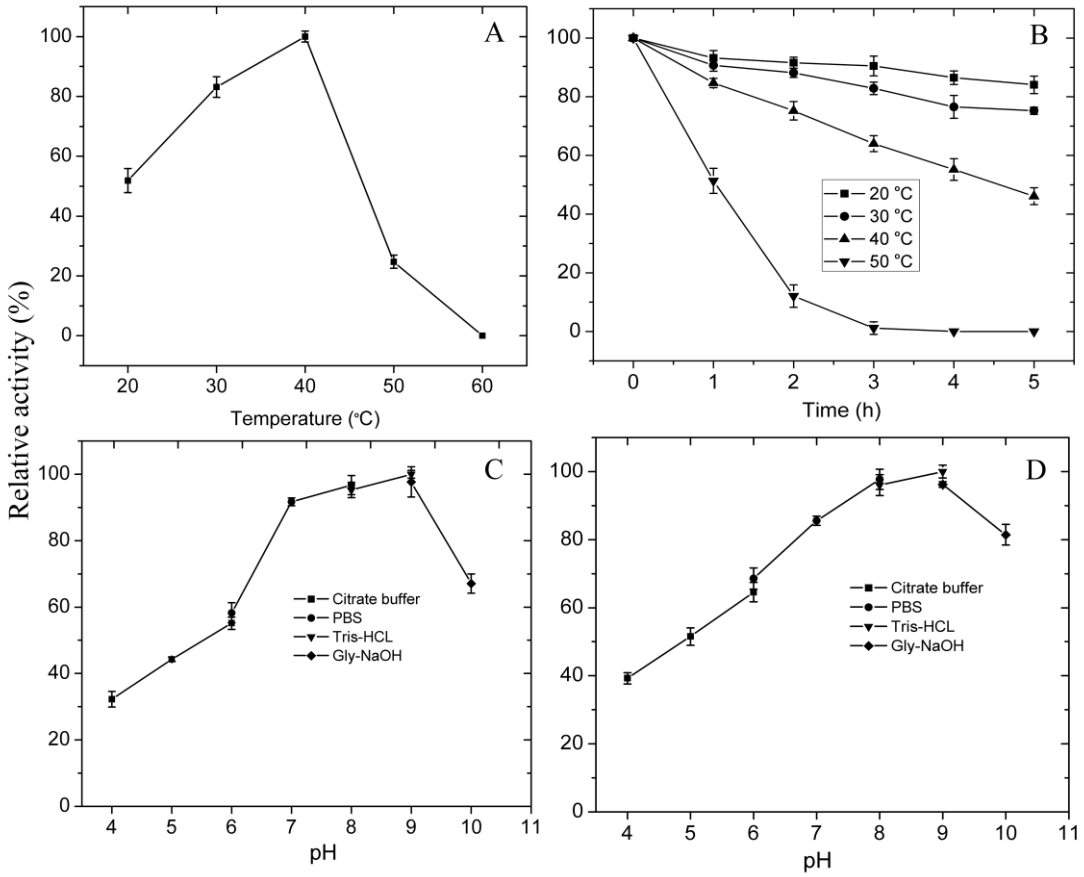

FIG S3. Enzymatic characterization of the purified recombinant IamA.

A, Effects of temperature on the activity of IamA; B, effects of temperature on the stability of IamA; C, effects of pH on the activity of IamA; D, effects of pH on the stability of IamA.

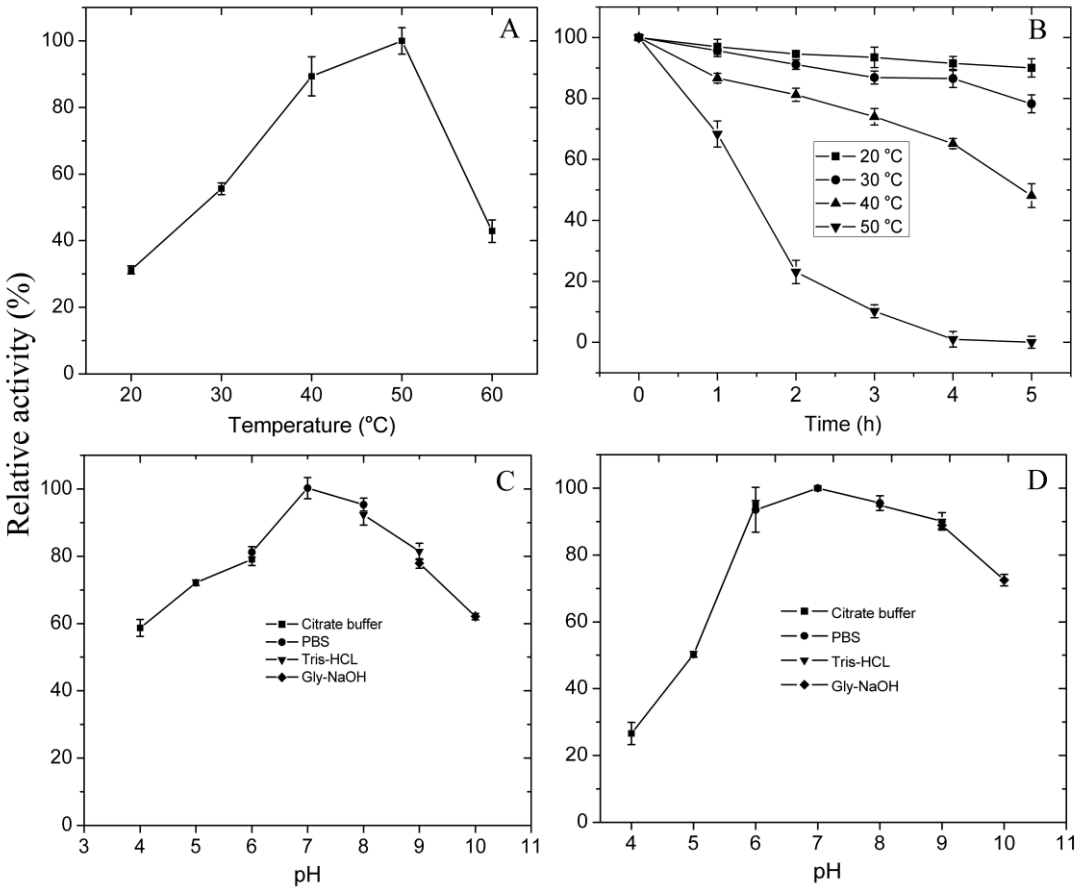

FIG S4. Enzymatic characterization of the purified recombinant NitA.

A, Effects of temperature on the activity of NitA; B, effects of temperature on the stability of NitA; C, effects of pH on the activity of NitA; D, effects of pH on the stability of NitA.