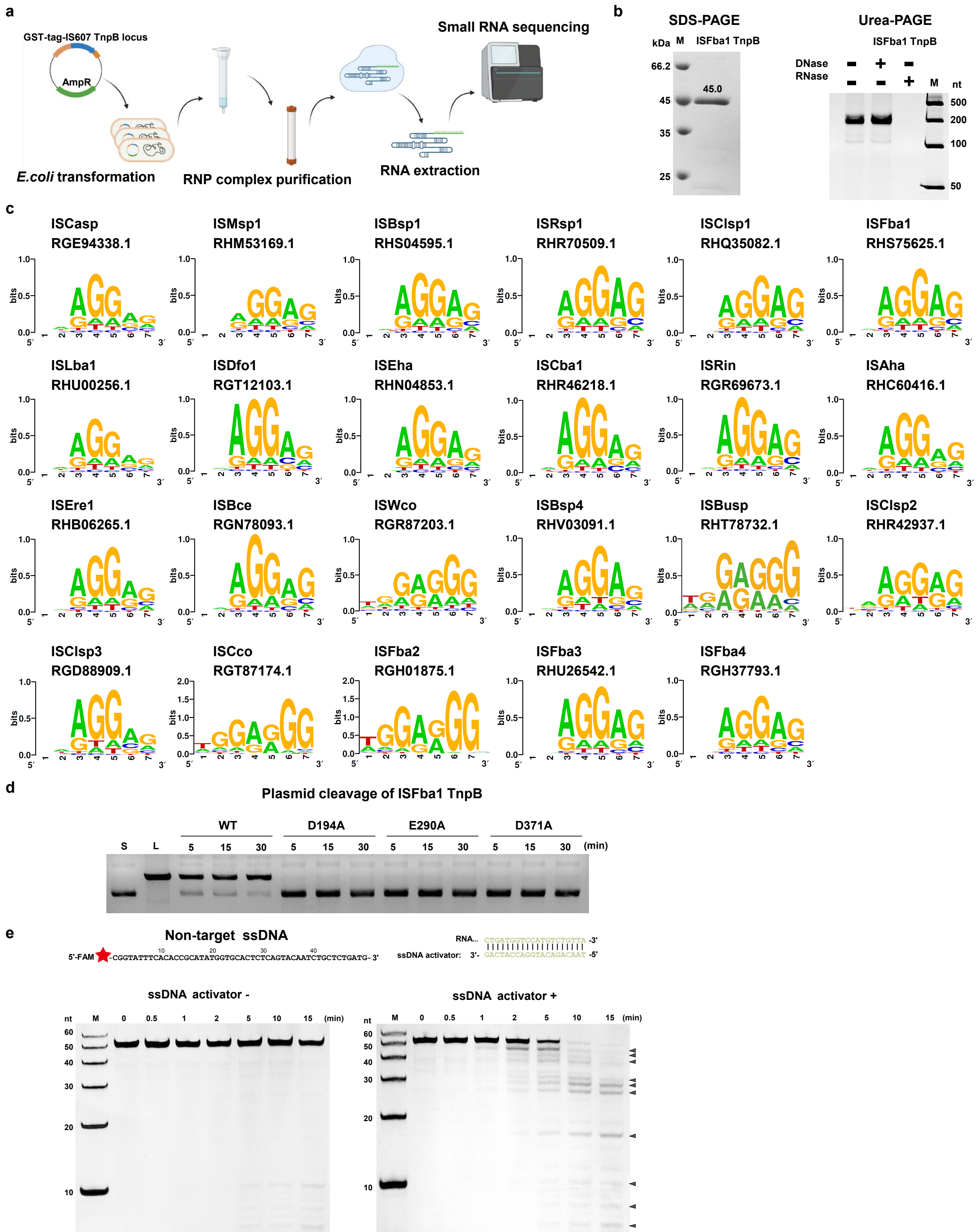




Supplementary information, Fig.S2: Characterization of the DNA cleavage activity of IS607 TnpB systems.

a Schematic of small RNA sequencing of the IS607 TnpB RNP complex.

b The SDS-PAGE(left) and 10% TBE-urea-PAGE(right) of the purified ISFba1 RNA-protein complex.

c Weblogo of TAM sequences for 23 IS607 TnpB systems from 22 bacterial strains of 17 different species. The detailed information of the different IS607 TnpB proteins is provided in Supplementary information, Table S2.

d In vitro time gradient plasmid cleavage mediated by wild type ISFba1 TnpB and mutants (D194A, E290A, D371A). The agarose gel was resolved by EB staining. S, supercoil plasmid. L, linearized plasmid. Data shown are representative of three independent experiments.

e ISFba1 TnpB-mediated 5'-FAM labeled ssDNA cleavage with a 20-nt target ssDNA activator monitored by 20% TBE-urea-PAGE gel electrophoresis. Cleavage products are labeled by triangles. M, ssDNA marker.

ssDNA activator-, reaction without ssDNA activator. ssDNA activator+, reaction with ssDNA activator. Data shown are representative of three independent experiments.