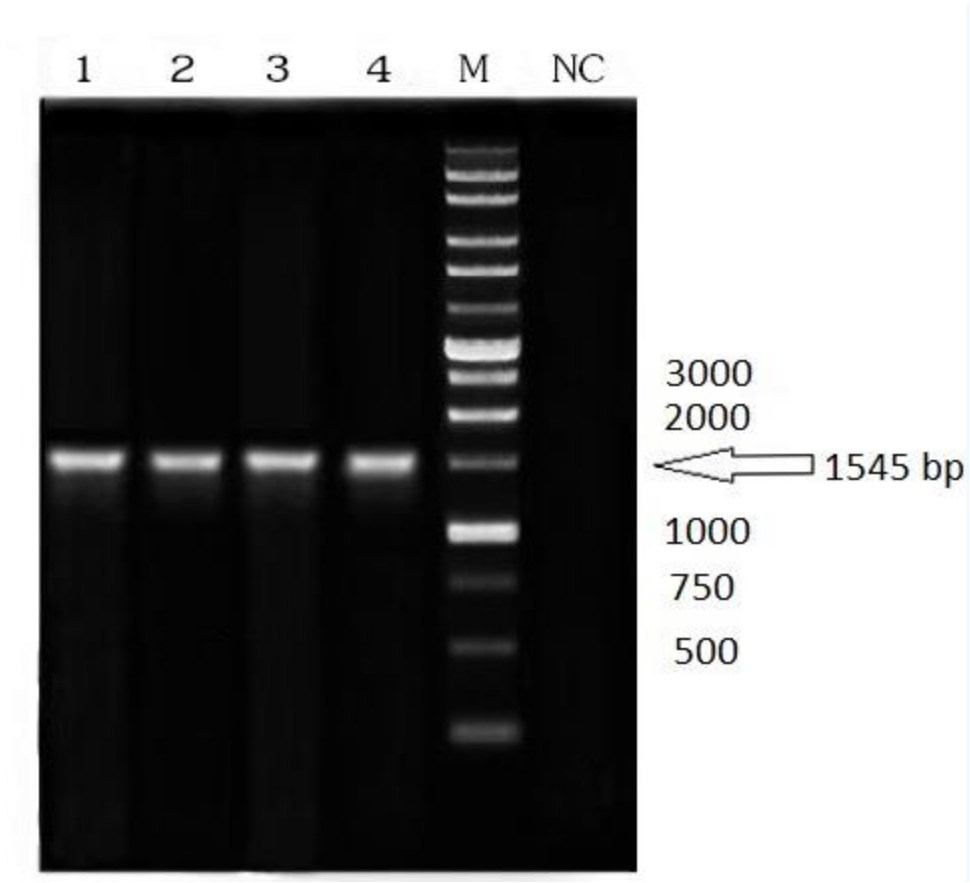

Figure 1. Amplification of 1545 bp from the *flaA* gene using specific primers. Lanes M, NC, and **1–4** represent the 1Kb DNA size marker, PCR negative control, and *flaA* amplicons, respectively.

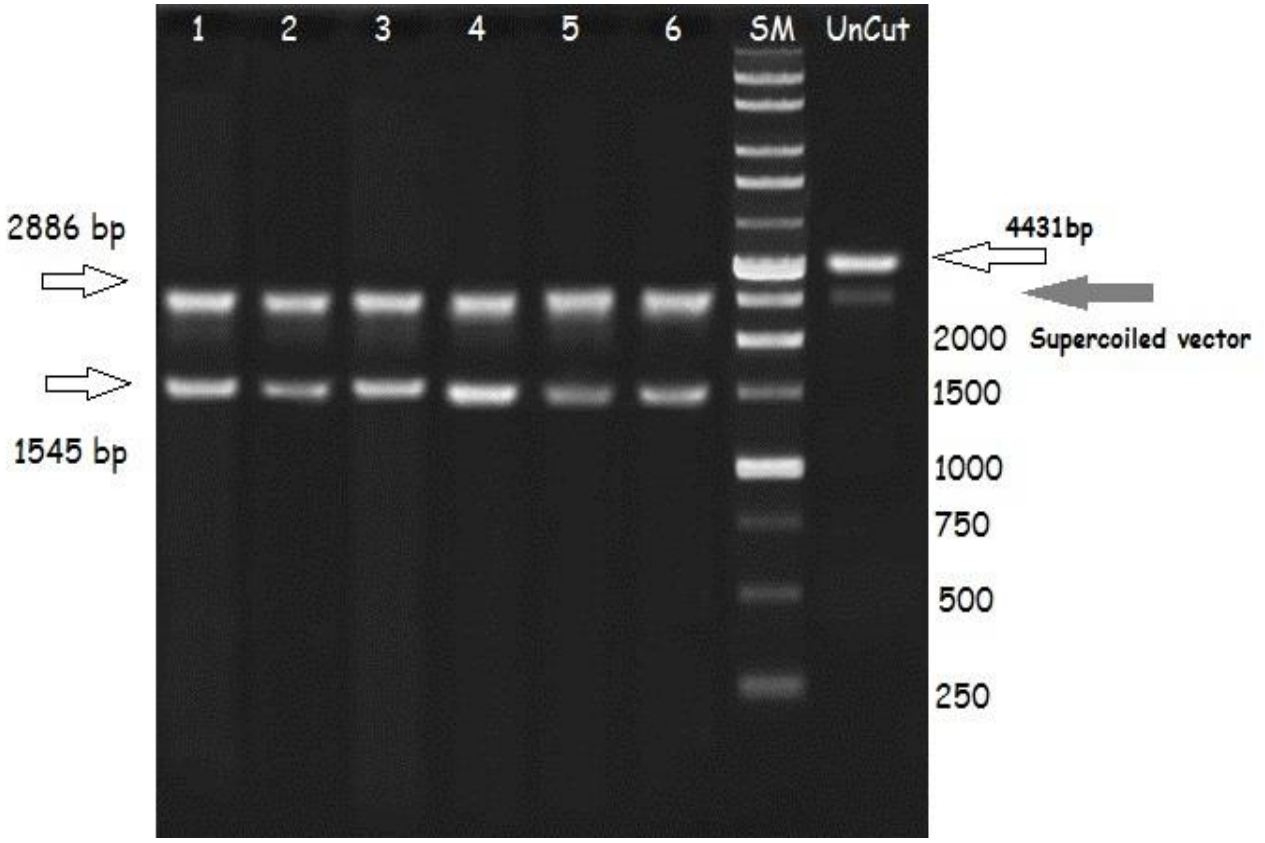

Figure 2. Double digestion of recombinant pTZ57RT-*flaA* using *SalI* and *XbaI* restrictive endonucleases to validate *flaA* cloning into the pTZ57RT vector. Lane SM, Lanes 1-6, and lane uncut represent the 1Kb DNA marker, pTZ57RT vector (2886 bp) + *flaA* fragment (1545 bp), and undigestedpTZ57RT-*flaA (4431bp)*.

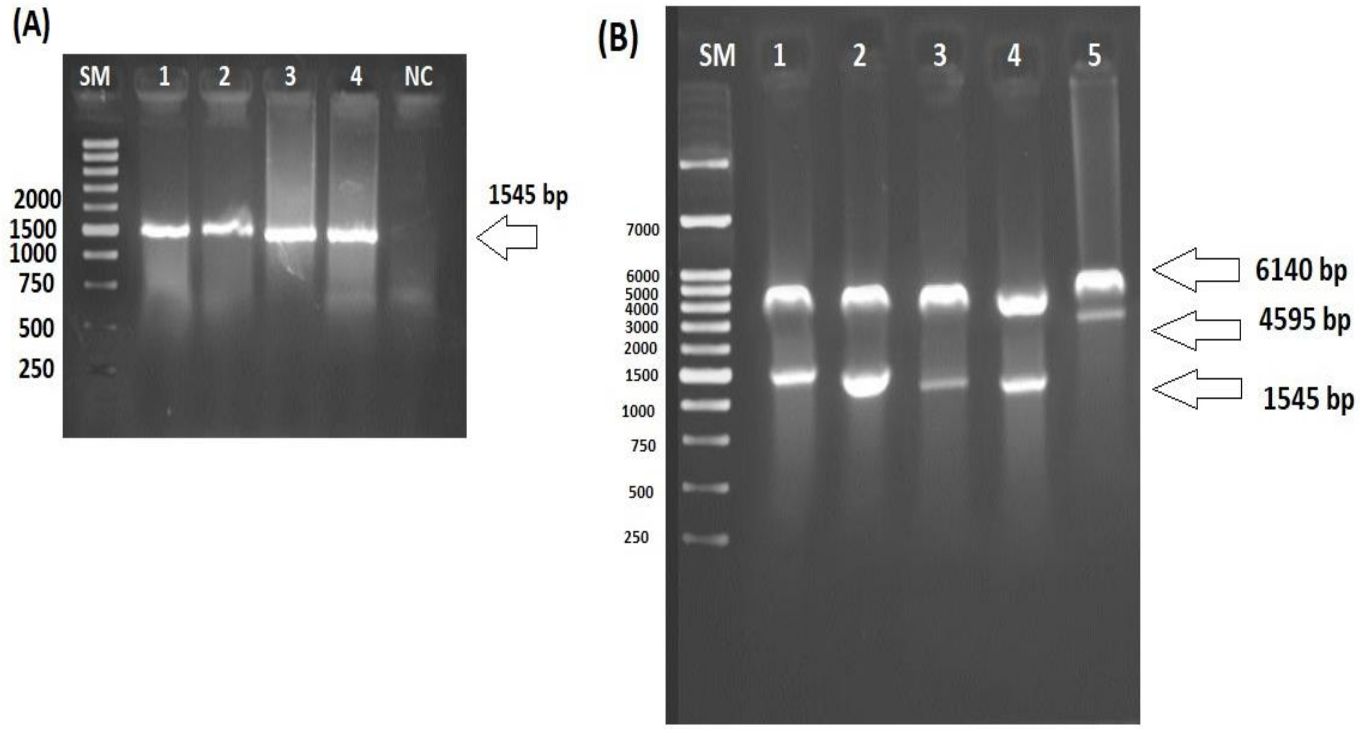

Figure 3A) Cloning of *flaA* in pBudCE4.1 was validated by colony PCR using *flaA* specific primers. Lane SM, 1-4, and NC are 1Kb DNA markers, amplified *flaA* gene (1545 bp) from pBudCE4.1–*flaA*, and negative control, respectively.

Figure 3B) Double digestion of recombinant pBudCE4.1-*flaA* using *SalI* and *XbaI* restrictive endonucleases to validate *flaA* cloning into the pBudCE4.1 vector. Lane SM, Lanes 1-4, and Lane 5 represent the DNA marker, pBudCE4.1 vector (4595 bp) + *flaA* fragment (1545 bp), and undigested pBudCE4.1-*flaA*.

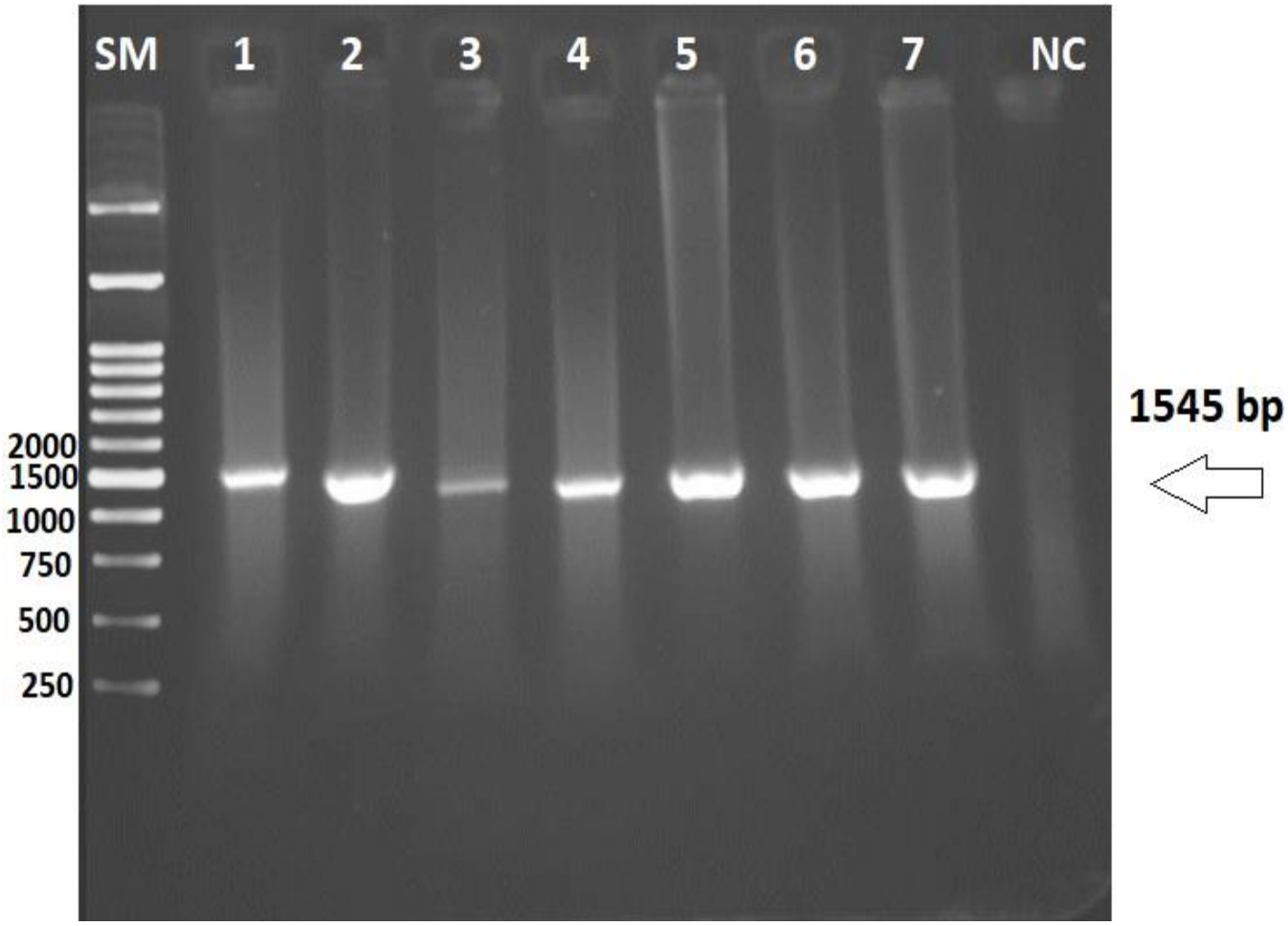

Figure 4. RT-PCR confirmed that HDF cells received and expressed the recombinant pBudCE4.1-*flaA* construct.