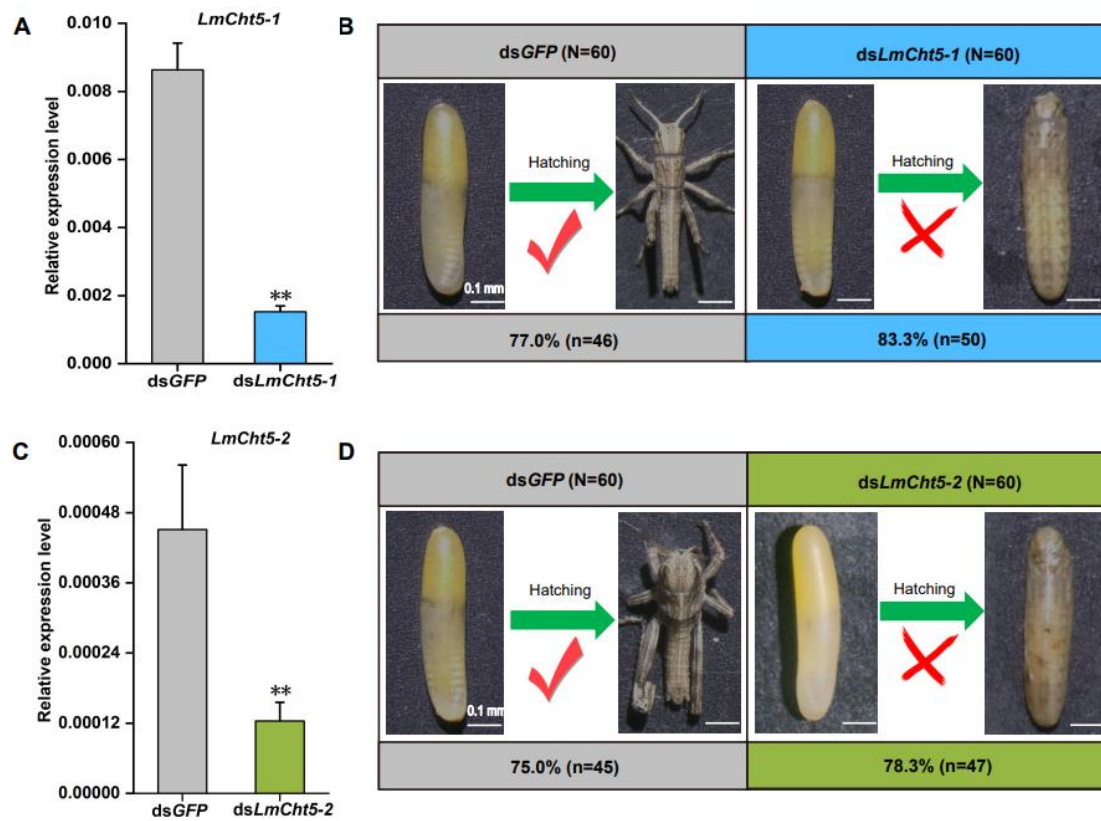


**Figure S1.** Microinjection of *dsLmCht5-1* and *dsLmCht5-2* block locust development during the early serosal cuticle degradation A and C. The mRNA expression level of *LmCht5-1* (A) and *LmCht5-2* (C) detected by RT-qPCR is reduced at E6 after microinjection of *dsLmCht5-1* and *dsLmCht5-2* at E5, respectively. B and D, Katatrepsis is the typical development of locust egg during E5 to E7. Microinjection of *dsLmCht5-1* (B) and *dsLmCht5-2* (D) at E5 caused the blocking and delay of katatrepsis in certain extent, respectively. Scale bar is 0.1 mm.



**Figure S2.** Microinjection of *dsLmCht5-1* and *dsLmCht5-2* block locust hatching. A and C. The mRNA expression level of *LmCht5-1* (A) and *LmCht5-2* (C) detected by RT-qPCR is reduced at E8 after microinjection of *dsLmCht5-1* and *dsLmCht5-2* at E7, respectively. B and D. Hatching from egg is the typical developmental phenotype of locust egg at E13 or E14. Microinjection of both *dsLmCht5-1* (B) and *dsLmCht5-2* (D) at E14 blocked hatching rate. Scale bar is 0.1 mm.