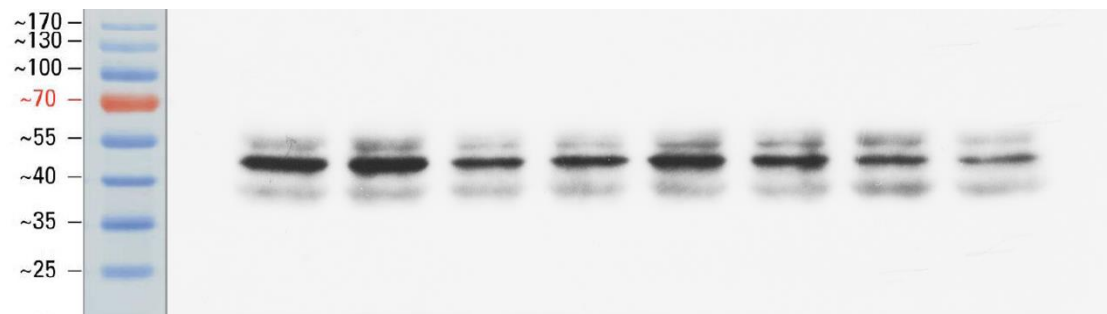


**A GenBank: XP\_005463932.1**

MEDLDALLADLESTSSPLPRCPVLLTSDPPQNSDPTTQDSAQTRPPPPAYTPQQ  
TVSSAMKTTQNSTPDKLYSTVCKPRSPRSADPPLAFSSSSLLGGGLSELDHLLQ  
ELNATQFNITDEILAQFPSSKKDERDNIKDKAPTSSSSSAKPSATSATLELDKLM  
ASLSDFRVQSTPAAPVTPAPVTASPQQPAAAPPQPPSSGSLDSMLGLLQSDLS  
RQGVQTSSKGNCACQKPVVGGQVVTALGKVWHPEHFVCTECETELGSRNFF  
EKDGRPYCEPDYFTLFSPHCAHCNKPILNKMVTALDKNWHPECFCCKVKCSRA  
FGEEGFHDREGQQYCQQCFLTLFASRCQGCSQPILENYISALNSLWHPQCFVC  
RECYSFPVNGSFFEHEGKPLCEAHYHQSRGSMCQACQQPILGRCVTAMGAKF  
HPHHLVCHFCLKPLSKGCFKEQENKPYPCHPCFIKLFG

**TGFβ1I1 protein sequence: QNSDPTTQDSAQTRP**

**B**



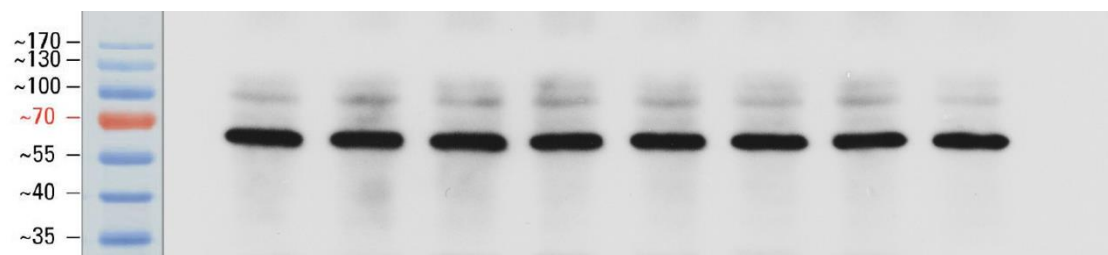
**Figure S1 TGFβ1I1 protein sequence information and marker map of Nile tilapia *Oreochromis niloticus*.**

**A** GenBank: AHN82370.1

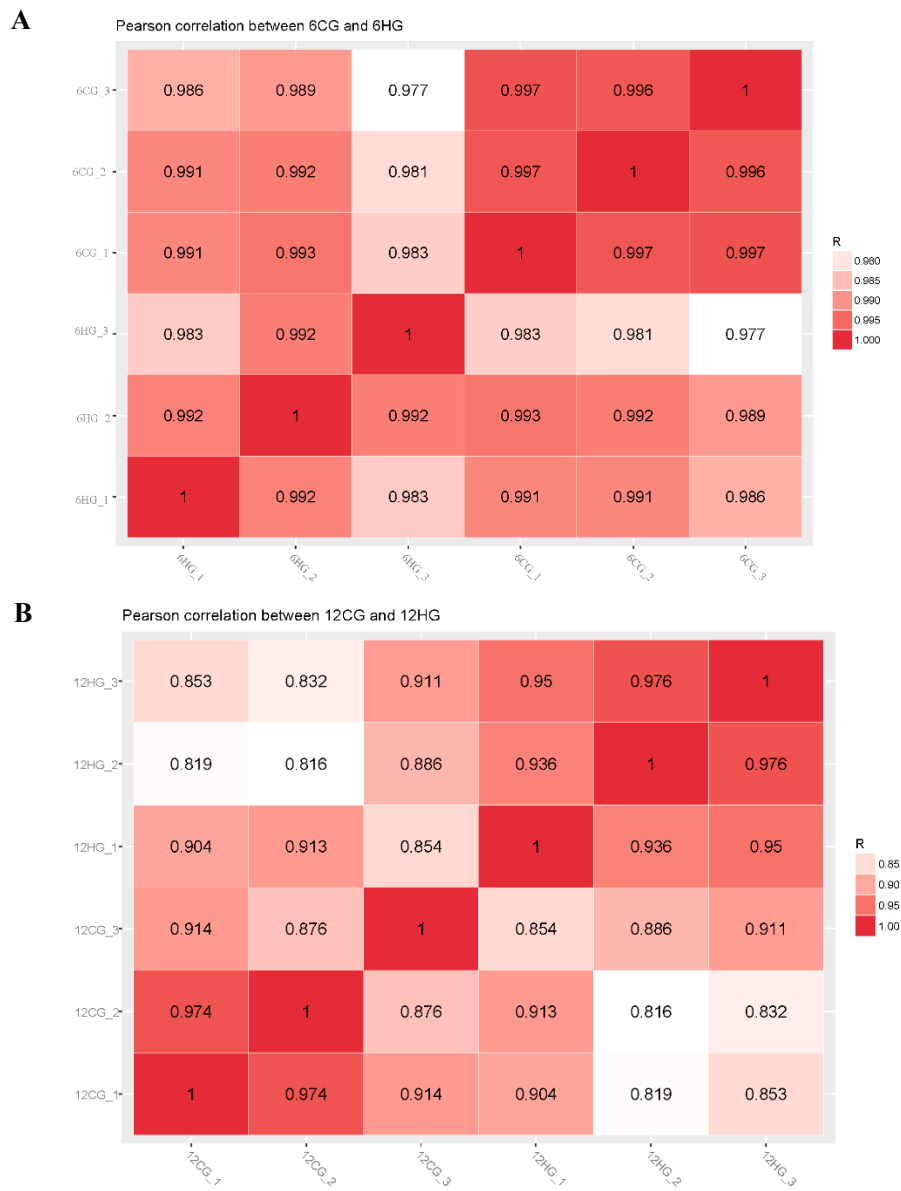
IAALVVDNGSGMCKAGFAGDDAPRAVFPSIVGRPRHQGVMMVGMGQKDSYV  
GDEAQSQRGILTLKYPIEHGIVTNWDDMEKIWHHTFYNELRVAPEEHPVLLTE  
APLNPKANREKMTQIMFETFNTPAMYVAIQAVLSLYASGRTTGIVMDSGDGV  
THTVPIYEGYALPHAILRLDLAGRDLTDYLMKILTERGYSFTTTAEREIVRDIK  
EKLCYVALDFEQEMGTAASSSSLEKSYELPDGQVITIGNERFRCPEALSQPSFL  
GMESCGIHETTYNSIMKCDVDIRKDLYANTVLSGGTTMYPGIADRMQKEITA  
LAPSTMKIKIIAPPERKYSVWIGGSILASLSTFQQMWISKQEYDESGPSIVHRKC  
F

**$\beta$ -actin protein sequence: ISKQEYDESGPSIV**

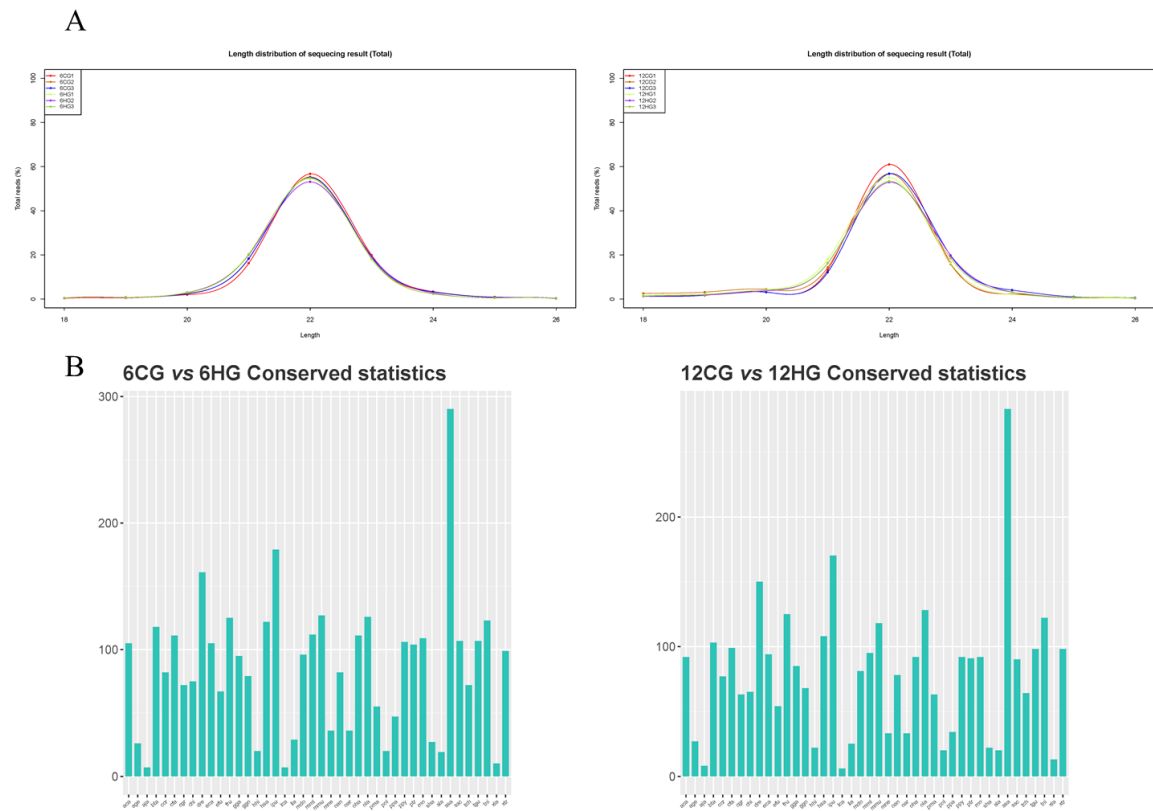
**B**



**Figure S2  $\beta$ -actin protein sequence information and marker map of Nile tilapia *Oreochromis niloticus*.**



**Figure S3** Quality assessment of miRNA sequencing results in 6CGs vs 6HGs and 12CGs vs 12HGs



**Figure S4 Length distribution of counts of total and unique sRNAs (A) and conservation profile of the identified miRNAs (B)**