

A)

Chicken alphaE	ALTOAEKAAVTTIWAQVATQIESIGLESLELRFASYPQTKTYFPHFDDVDSQGSVQLRGHGS
Zebra finch alphaE	TLTQAEKAAVVTIWAQVATQADAIGAESLELRFSLYPQTKTYFPHFDDLSQGSQAQLRGHGS
Anole lizard alphaD	VLTAEDRKLTLTAIWGKVSGLHDEIGGDALNRMFMCFPSTKTYFPHFDDLSPGSKDIQVHGQ
Chicken alphaD	MLTAEDKKLIQQAWEKAASHQEFEAGAEALTRMFTTYPQTKTYFPHFDDLSPGSDQVVRGHGK
Zebra finch alphaD	MLTGEDKKLLQQTWGWKLGGAEEVGDALWRMFMHSYPPTKTYFPHFDDMSQGSQDQVVRGHGK
Anole lizard alphaA	MLTEDDKNHIRAIWGHVSSNPELYGAEALTRLFAAHHTTKTYFPHYDMSPGSAQIKAHGK
Zebra finch alphaA	VLSAGDKSNVKAQVFGKIGGQADEYGADALERMFATYPQTKTYFPHFDDLGKGSQAQVKGHGS

*: .: : : : . : * ::* :* . *****:*. ** :. **.

Chicken alphaE	KVLNAIGEAVKNIDDIRGALAKLSELHAYILRVDPVNFKLLSHCILCSVAARYPSDFTPE
Zebra finch alphaE	KVMSAIGEAVKDIDDIRRALAKLSELHAYILRVDPVNFKLLSHCILCSVAAHYPLDFTPE
Anole lizard alphaD	KVARALDMALHHLDNVRGTLADLSLHAYNLRVDPVNFKLLIKCFHVVLATHLRGEYTCL
Chicken alphaD	KVLGALGNAVKNVDNLSQAMAELSNLHAYNLRVDPVNFKLLSQCIQVVLAVHMGKDYTPE
Zebra finch alphaD	KVMAALSNAVKNLDNLSQALSELNLHAYNLRVDPVNFKLLSQCLQVTLATRLGKEYSPE
Anole lizard alphaA	KVVEAITQAVNNLDDIAGALAKLADLHAEKLRVDPVNFLLGHCLLVTTIAAHNRGPLKPE
Zebra finch alphaA	KVAAALVEAANNVDDLALGALSLSLHAQKLRVDPVNFKLLGQCFLVVVATRNPSLLTPE

** *: * : :*: : :*:** ***** :* :* :*.. .

Chicken alphaE	VHAAWDKFLSSISSVLTEKYR
Zebra finch alphaE	VHAAWDKFLSSVSSVLTEKYR
Anole lizard alphaD	AHRAVDKFLFAVAEILGEKYR
Chicken alphaD	VHAAFDKFLSAVAVLAEKYR
Zebra finch alphaD	VHSAVDKFMASAVAVLAEKYR
Anole lizard alphaA	FILALDKCFTSIGRVLIAQYR
Zebra finch alphaA	VHASLDKFLCAVGTVLTAKYR

: ** : :. :* :**

B)

Chicken rho	VHWSAEKQLITSVWSKVNVEECGAEALARLLIYYPWTQRFDFNFGNLSPTAIIGNPK
Chicken epsilon	VHWSAEKQLITSVWSKVNVEECGAEALARLLIYYPWTQRFDFASFGNLSPTAIMGNPR
Zebra finch rho	VHWSAEKQLIASVWGRVSVVEECGAEALARLLIYYPWTQRFDFSGNLSPTAIVGNPK
Chicken BH	VHWTAEKQLITGLWGKVNVAECGAEALARLLIYYPWTQRFDFASFGNLSPTAIVGNPM
Zebra finch BH	VNWTAEKQLVTTLWGRVNVDECGAEALARLLVYYPWTQRFDFVSGNMSPTAVLGNPM
Chicken BA	VHWTAEKQLITGLWGKVNVAECGAEALARLLIYYPWTQRFDFASFGNLSPTAILGNPM
Zebra finch BA	XXWTAEKQLITGLLGKVNVEPCGAEALARLLIYYPWTQRFDFASFGNLSPTAVLGNPK
Anole lizard B1	VHWTAEKQLITGLWGKVDVATVGAESLGGMVCYPWTQRFDFDFGNLSPTAICANPK
Anole lizard B2	VHWTAEKQLIANCWSKVDIGQIGGDALACLLCVYPWTQRFDFDFGNLSNAATCANAK

*:*****: .*. : *.:* . : : ***** .***:*. :* :* .

Chicken rho	VRAHGKVLSSFGAEVKNLDNIKNTYAKLSELHCEKLVDPENFRLLGNILIVLAAHFT
Chicken epsilon	VRAHGKVLSSFGAEVKNLDNIKNTYAKLSELHCDKLVDPENFRLLGDILIVLASHFA
Zebra finch rho	VRAHGKVLTSFGEAIKNDNLKGTYSKSELHCDKLVDPENFRLLGDILIVLAAHFT
Chicken BH	VRAHGKVLSSFGAEVKNLDNIKKSFAQLSKLHCDKLVDPENFRLLGDILIVLASHFS
Zebra finch BH	VRAHGKVLTSFGEAVRNMDSVKCFQAQLSKLHCEKLVDPENFRLLGDVLLVVLASHFG
Chicken BA	VRAHGKVLTSFGDVAVKNLDNIKNTFSQLSELHCDKLVDPENFRLLGDILIVLAAHFS
Zebra finch BA	VQAHGKVLTSFGEAVKNLDSIKNTFSQLSELHCDKLVDPENFRLLGDILIVVLAHFG
Anole lizard B1	VRAHGKVLTAFGDAIKSLDNIKDTFAKLSELHCDKLVDPENFKLLGKILLVLAGHHG
Anole lizard B2	VKAHGKVLTAFGAEVKNLDNIKDTFAKLSELHCDKLVDPVNFNLLGDVLIIVCLAAHFG

*.*****:*. :*.:* . : : ***** .***:*. :* :* .

Chicken rho	KDFTPTCQAVWQKLVSVVAHALAYKYH
Chicken epsilon	RDFTPACQFAWQKLVNVVAHALARKYH
Zebra finch rho	KEFTPACQATWQKLVGVVAHALARKYH
Chicken BH	KDFTPASQAAWQKLVVVAHALAHEYH
Zebra finch BH	KEFTPACQAAWQKLVVVAHALAHEYH
Chicken BA	KDFTPCQAAWQKLVVVAHALARKYH
Zebra finch BA	KDFTPDCQAAWQKLVVVAHALARKYH
Anole lizard B1	KDFTPACHAAYQKLVNVVSHALARRYH
Anole lizard B2	KDFTPACHAAYQKLVNSVAHGLSRRYH

.:*** .: .:*. :* :*.:* :**

Supplementary Figure 1. Amino acid sequence alignments of α - and β -globin genes of the chicken (*Gallus gallus*), zebra finch (*Taeniopygia guttata*) and the Anole lizard (*Anolis carolinensis*). A) α -globin genes alignment, B) β -globin genes sequence alignment.