

## Supplementary data

614 AGAAGTTGGAAGAAGAGAAAAAAGTTAGTTAGGTTAGTGAGAGGGCTGTGATTTTCAA  
TGGCAGTACAGTCACTACCAATGCCTGCGTTAGAAGAGCCGTAACACTCTGGAAAAGCA  
ACACAGACAACGATTTTAGAAAAGTTTAGACACCTTAGAAAAAGTTTAGAGATACAGTTT  
TGTAGATATGCGCGTTTTCCACATTATTGGGTGTTTTGGCAAGCAGCAAAACACAACG  
TTGCCAATTTTTCTTCGCAAGGCTTGGATAATTGATAAAGCGGCCGGACACAGAACA  
TCTTTTGGGTGTTTTGGATTAAAATTTTCGCCATTTGTATGGTTGCAGCCGACTTTCC  
TTGAAAACGGTTTCAGTTGGATAGAAAAGAGTTTTACTTTTATCTGGAGTCATGGATC  
CGAACCAGCACAAACCCTCCAGCCGGCCACCAGATCGTCCATGTTTCGGGGAGACTCCGAGA  
CCGATCTGGAGGCTCTTTTAAACGCTGTGATGAACCCGAAAAACACCATCGTCCCCCTT  
CCGTGCCGATGAGGTTGAGAAAGCTGCCAGTCTCATTCTTACGCCGCCAGAGCCAAAGT  
CCCCTCCAGACAA

236 GCCAGTACAGATGCAGGTACTGCTGGTACCGTCACGCCCATCACGTCCGGGCACACTCC  
TCACCTGCCTCCTGACGCTGGGCGCAGTTTCTCCTGGTGCCTGACCAGCATGGGTCCA  
GCAAAACGCCCCACCTCAGCACCTCCGCCAGTCTCTTACGAGATACCTGATGACATGCCG  
CTGCCCCAGGCTGGGAGATGGCCAAGACCCCTTCGGGACAGAGATACTTCTTAAA

intron2 gtgagttgtaatgttcttgataaacgctactacagcatcatgggttaggggtgattaattgtttg

119 CCATAATGACCAGACGACCACCTGGCAGGACCCACGTAAAGCTCTCCTTCAGATGAACCA  
GGCCGCCCCAGCCAGCCAGTGCCTGTGACGCAACAGAACATCATGAACCCAGCCTCAG

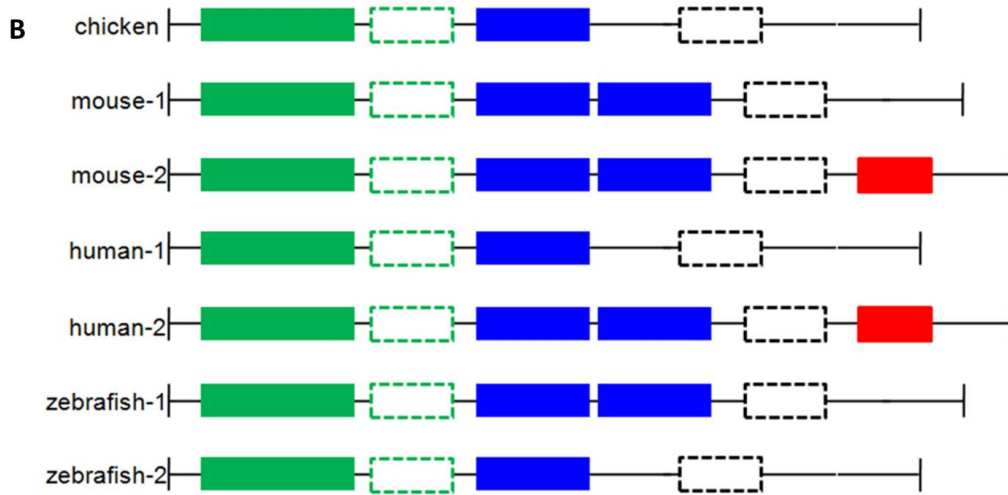
114 GTCCTCTTCTGACGGGTGGGAACAAGCTATTACCTCAGAAGGAGAAATCTACTACATCA  
ATCACAAAGAACAAAACCCTCTTGGCTGGACCCACGACTTGACCCGCGTTTCG

173 CAATGAACCAGCAGCGAATTTCCAGAGTGCCCCAGTAAAGCAAGGTTCCAGTTGCCCT  
CCAGCCACAGAGTGGAGTGATGAGTGGAAACAACCCCATCCGACTGCAGCAGATCCACA  
TAGAGAAGGAGAGACTGAGGATCAAAACAAGAGCTCCTTCGCCAGAGACCTCAG

**Figure S1. Nucleotides sequences of RT-PCR after yap-MO(S) injection and difference between two transcript variants.** yap-MO(S) targeted site is underlined by a red line. Primers used in RT-PCR are underline by two green arrows. After yap-MO(S) injection, the large fragment contains parts of intron 2 which is wrote in blue and the small fragment omits exon 2. The YAP transcript variant YAP2 loses the forth exon which is underlined by a black line.

A

chicken	MDPGQPQPQ-QFPQAAQ-PPAPQQAAPQPPGAGSGAPGGAAQPPGAGH
mouse-1	MEPAQQPPPPQAPQGPA-PPS-----VSPAGTAAAPPA
mouse-2	MEPAQQPPPPQAPQGPA-PPS-----VSPAGTAAAPPA
human-1	MDPGQPPPPQAPQGGG-PPS-QPPQGGPPSSGGPQAPAPAAATQAAPQA
human-2	MDPGQPPPPQAPQGGG-PPS-QPPQGGPPSSGGPQAPAPAAATQAAPQA
zebrafish-1	MDPNQHN-----
zebrafish-2	MDPNQHN-----
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chicken	PPAGHQIVHVRGDSETDLEALFNAVHNPFGANVPHITLPMRLRKLDPDSF
mouse-1	PPAGHQVVHVRGDSETDLEALFNAVHNPKTANVPTVPMRLRKLDPDSF
mouse-2	PPAGHQVVHVRGDSETDLEALFNAVHNPKTANVPTVPMRLRKLDPDSF
human-1	PPAGHQIVHVRGDSETDLEALFNAVHNPKTANVPTVPMRLRKLDPDSF
human-2	PPAGHQIVHVRGDSETDLEALFNAVHNPKTANVPTVPMRLRKLDPDSF
zebrafish-1	PPAGHQIVHVRGDSETDLEALFNAVHNPKNITVPPSVPMRLRKLDPDSF
zebrafish-2	PPAGHQIVHVRGDSETDLEALFNAVHNPKNITVPPSVPMRLRKLDPDSF
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chicken	PKPPEPKSHSRQASTDAGTAGALTPQHVRHSSPASLQLGAVSPGTLT
mouse-1	PKPPEPKSHSRQASTDAGTAGALTPQHVRHSSPASLQLGAVSPGTLT
mouse-2	PKPPEPKSHSRQASTDAGTAGALTPQHVRHSSPASLQLGAVSPGTLT
human-1	PKPPEPKSHSRQASTDAGTAGALTPQHVRHSSPASLQLGAVSPGTLT
human-2	PKPPEPKSHSRQASTDAGTAGALTPQHVRHSSPASLQLGAVSPGTLT
zebrafish-1	PTPPEPKSHSRQASTDAGTAGTIVTPIHVRAHSSPASLQLGAVSPGALT
zebrafish-2	PTPPEPKSHSRQASTDAGTAGTIVTPIHVRAHSSPASLQLGAVSPGALT
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chicken	PSGVVTPGGA-PSQHILRQSSFEIPDDVPLPAGWEMAKTTPSGQRYFLN
mouse-1	ASGVVSGPAAAPAAQHILRQSSFEIPDDVPLPAGWEMAKTSSGQRYFLN
mouse-2	ASGVVSGPAAAPAAQHILRQSSFEIPDDVPLPAGWEMAKTSSGQRYFLN
human-1	PTGVVSGPAAATPQAQHILRQSSFEIPDDVPLPAGWEMAKTSSGQRYFLN
human-2	PTGVVSGPAAATPQAQHILRQSSFEIPDDVPLPAGWEMAKTSSGQRYFLN
zebrafish-1	SM-----GPNAP-PQHILRQSSYEIPDDMPLPAGWEMAKTTPSGQRYFLN
zebrafish-2	SM-----GPNAP-PQHILRQSSYEIPDDMPLPAGWEMAKTTPSGQRYFLN
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chicken	HIDQTTWQDPRKAMLSQINVTAPTSF-PV-QQNNHNSAS-----
mouse-1	HNDQTTWQDPRKAMLSQINVPAPASF-AV-PQTIHNSASGPIPDGRWE
mouse-2	HNDQTTWQDPRKAMLSQINVPAPASF-AV-PQTIHNSASGPIPDGRWE
human-1	HIDQTTWQDPRKAMLSQINVTAPTSF-PV-QQNNHNSAS-----
human-2	HIDQTTWQDPRKAMLSQINVTAPTSF-PV-QQNNHNSASGPIPDGRWE
zebrafish-1	HNDQTTWQDPRKALL-QMNGAAPASFPVPLQQNIDNHPASGPIPDGRWE
zebrafish-2	HNDQTTWQDPRKALL-QMNGAAPASFPVPLQQNIDNHPAS-----
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chicken	QAMTQDGEVYIYNHBNKTTSWLDPRLLDPRFAMN-ORIISQAPVKOPPE
mouse-1	QAMTQDGEVYIYNHBNKTTSWLDPRLLDPRFAMN-ORIISQAPVKOPPE
mouse-2	QAMTQDGEVYIYNHBNKTTSWLDPRLLDPRFAMN-ORIISQAPVKOPPE
human-1	QAMTQDGEIYIYNHBNKTTSWLDPRLLDPRFAMN-ORIISQAPVKOPPE
human-2	QAMTQDGEIYIYNHBNKTTSWLDPRLLDPRFAMN-ORIISQAPVKOPPE
zebrafish-1	QAITSEGIYIYNHBNKTTSWLDPRLLDPRFAMN-ORIISQAPVKQSSQ
zebrafish-2	QAITSEGIYIYNHBNKTTSWLDPRLLDPRFAMN-ORIISQAPVKQSSQ
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chicken	LAPQSPQGGVVGSSSNQQQQMRLLQQLQMEKERLRRLKQOELLRN
mouse-1	LAPQSPQGGVVGSSSNQQQQIQLQQLQMEKERLRRLKQOELLFR
mouse-2	LAPQSPQGGVVGSSSNQQQQIQLQQLQMEKERLRRLKQOELLFRQATFRN
human-1	LAPQSPQGGVVGSSSNQQQQMRLLQQLQMEKERLRRLKQOELLRQV
human-2	LAPQSPQGGVVGSSSNQQQQMRLLQQLQMEKERLRRLKQOELLRQAMBN
zebrafish-1	L-PSSPQSGVMSGNN-----PILRQQIHIKERLRRLRQ-ELLRC
zebrafish-2	L-PSSPQSGVMSGNN-----PILRQQIHIKERLRRLRQ-ELLRC
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chicken	-----QELALRSQLPT-LEQDGGTQNPVSSPGMSQELRTMTT
mouse-1	-----QELALRSQLPT-LEQDGGTQNPVSSPGMSQELRTMTT
mouse-2	LNPSSTANAPKQELALRSQLPT-LEQDGGTQNPVSSPGMSQELRTMTT
human-1	-----RQELALRSQLPT-LEQDGGTQNPVSSPGMSQELRTMTT
human-2	LNPSSTANSKQELALRSQLPT-LEQDGGTQNPVSSPGMSQELRTMTT
zebrafish-1	-----RQELALRNQLPTSMEDGGTQNPVSSPGMGQDARNMTT
zebrafish-2	-----RQELALRNQLPTSMEDGGTQNPVSSPGMGQDARNMTT
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chicken	NSSDPFLNSGTYHSRDESDTSGLSMSSYSVPRTPDDFLNSVDEMGTGD
mouse-1	NSSDPFLNSGTYHSRDESDTSGLSMSSYSI PRTPDDFLNSVDEMGTGD
mouse-2	NSSDPFLNSGTYHSRDESDTSGLSMSSYSI PRTPDDFLNSVDEMGTGD
human-1	NSSDPFLNSGTYHSRDESDTSGLSMSSYSVPRTPDDFLNSVDEMGTGD
human-2	NSSDPFLNSGTYHSRDESDTSGLSMSSYSVPRTPDDFLNSVDEMGTGD
zebrafish-1	NSSDPFLNSGTYHSRDESDTSGLSMSSYSVPRTPDDFLNSVDEMGTGD
zebrafish-2	NSSDPFLNSGTYHSRDESDTSGLSMSSYSVPRTPDDFLNSVDEMGTGD
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chicken	SIISQSNIPSHQNRFPDYLEAIPGTNVDLGTLEGGDMNIEGEEELMPSLQ
mouse-1	TIISQSTLPSQQSRFPDYLEAIPGTNVDLGTLEGGDAMNIEGEEELMPSLQ
mouse-2	TIISQSTLPSQQSRFPDYLEAIPGTNVDLGTLEGGDAMNIEGEEELMPSLQ
human-1	TINQSTLPSQQNRFPDYLEAIPGTNVDLGTLEGGDMNIEGEEELMPSLQ
human-2	TINQSTLPSQQNRFPDYLEAIPGTNVDLGTLEGGDMNIEGEEELMPSLQ
zebrafish-1	TLGPGSMATQPSRFPDYLDALPGTDVVDLGTLEGGSMAVEEGEELMPSLQ
zebrafish-2	TLGPGSMATQPSRFPDYLDALPGTDVVDLGTLEGGSMAVEEGEELMPSLQ
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chicken	EALSSDI LNDMESVLAATKLDKESFLTWI
mouse-1	EALSSDI LNDMESVLAATKLDKESFLTWI
mouse-2	EALSSDI LNDMESVLAATKLDKESFLTWI
human-1	EALSSDI LNDMESVLAATKLDKESFLTWI
human-2	EALSSDI LNDMESVLAATKLDKESFLTWI
zebrafish-1	EALSSDI LNDMESVLAATKLDKENFLTWI
zebrafish-2	EALSSDI LNDMESVLAATKLDKENFLTWI



**Figure S2. BLAST result and schematic diagrams of YAP amino Acids sequences from different organisms** A) Protein sequence comparison among chicken YAP (NCBI Reference Sequence NP\_990574), two mouse transcriptional variants (NCBI Reference Sequence: NP\_001164618 and NP\_033560), two human transcriptional variants (NCBI Reference Sequence: NP\_001123617 and NP\_006097), zebrafish YAP with only one WW domain and zebrafish YAP with two WW domains (NCBI Reference Sequence: NP\_001132952). These amino acid sequences were analyzed using T-coffee (<http://tcoffee.vital-it.ch/cgi-bin/Tcoffee/tcoffee.cgi/index.cgi>). In the alignment, spaces are introduced arbitrarily and are indicated with dots. WW domain is underlined (blue), each with two featured tryptophan (W) residues denoted by blue dots. TEA/TEAD-binding domain is underlined (green). The 14-3-3 binding site is indicated by a green dashed line. HXRXXS motifs are underlined (black). proline-rich regions are indicated by a black dashed line. B) A schematic diagram shows the structures of these different YAPs. Green rectangles represent the TEA/TEAD-binding domain. Green rectangular dashed lines represent the 14-3-3 binding site. WW domains are indicated by blue blocks. Black rectangular dashed lines represent the proline-rich regions. The red blocks represent the sequence of *AXRNINPSTANXP*. For the purpose of clarity, some of the proteins and domains were not drawn to scale.