
Evolution, dynamic expression changes and regulatory characteristics of
gene families involved in the glycerophosphate pathway of triglyceride
synthesis in chicken (*Gallus gallus*)

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Supplementary informations

Table S1.a. The species names and NCBI accession numbers of GPAT family for the phylogenetic tree construction

Gene	Species	NCBI accession numbers
GPAT2	Mm, <i>Mus musculus</i> (house mouse)	NP_001074558.2
	Dr, <i>Danio rerio</i> (zebrafish)	NP_001082849.1
	Hs, <i>Homo sapiens</i> (human)	NP_001082849.1
	Xt, (<i>Xenopus</i> (<i>Silurana</i>) <i>tropicalis</i> (western clawed frog)	XP_017947975.1
	Gg, <i>Gallus gallus</i> (chicken)	XP_015128446.1
	Bt, <i>Bos taurus</i> (cattle)	NP_001012282.1
	Fp, <i>Falco peregrinus</i> (peregrine falcons)	NP_001179563.1
GPAM	Hs, <i>Homo sapiens</i> (human)	NP_055461.1
	Bt, <i>Bos taurus</i> (cattle)	NP_001012282.1
	Dr, <i>Danio rerio</i> (zebrafish)	XP_009305069.1
	Xt, (<i>Xenopus</i> (<i>Silurana</i>) <i>tropicalis</i> (western clawed frog)	NP_001072564.1
	Gg, <i>Gallus gallus</i> (chicken)	NP_001072564.1
	Mm, <i>Mus musculus</i> (house mouse)	NP_001343214.1
	Fp, <i>Falco peregrinus</i> (peregrine falcons)	XP_005239302.1

Table S1.b. The species names and NCBI accession numbers of AGPAT family for the phylogenetic tree construction

Gene	Species	NCBI accession numbers
AGPAT1	Hs,Homo sapiens (human)	NP_006402.1
	Bt, Bos taurus (cattle)	NP_803484.1
	Xt, (Xenopus (Silurana) tropicalis (western clawed frog)	NP_001090802.1
	Gg, Gallus gallus (chicken)	XP_001233846.2
	Mm, Mus musculus (house mouse)	NP_001156851.1
AGPAT2	Hs, Homo sapiens (human)	NP_001012745.1
	Bt, Bos taurus (cattle)	NP_001073733.1
	Xt, (Xenopus (Silurana) tropicalis (western clawed frog),	NP_001123741.1
	Gg, Gallus gallus (chicken),	XP_001235300.2
	Mm, Mus musculus (house mouse),	NP_080488.1
	Dr, Danio rerio (zebrafish),	NP_001071200.1
Fp, Falco peregrinus (peregrine falcons)	XP_005231387.1	
AGPAT3	Hs,Homo sapiens (human)	NP_001032642.1
	Bt, Bos taurus (cattle)	NP_001033135.1
	Xt, Xenopus (Silurana) tropicalis (western clawed frog)	NP_001008119.1
	Gg, Gallus gallus (chicken)	XP_004934657.1
	Mm, Mus musculus (house mouse),	NP_443747.2
	Dr, Danio rerio (zebrafish)	NP_998590.1
FP, Falco peregrinus (peregrine falcons)	XP_005234551.1	
AGPAT4	Hs, Homo sapiens (human)	XP_016866548.1
	Bt, Bos taurus (cattle)	NP_001015537.1
	Xt, Xenopus (Silurana) tropicalis (western clawed frog)	NP_001011265.1
	Gg, Gallus gallus (chicken)	XP_419616.2
	Mm, Mus musculus (house mouse),	NP_080920.2
	Dr, Danio rerio (zebrafish)	NP_001035339.2
Fp, Falco peregrinus (peregrine falcons)	XP_005230336.1	
AGPAT5	Hs, Homo sapiens (human)	NP_060831.2
	Bt, Bos taurus (cattle)	XP_005225981.1
	Xt, Xenopus (Silurana) tropicalis (western clawed frog)	NP_001015964.1
	Gg, Gallus gallus (chicken)	XP_419916.1
	Mm, Mus musculus (house mouse)	NP_081068.1
	Dr, Danio rerio (zebrafish)	NP_001070213.2
Fg,Falco peregrinus (peregrine falcons)	XP_005238188.1	
AGPAT6	Bt, Bos taurus (cattle)	NP_001077138.1
	Xt, Xenopus (Silurana) tropicalis, (western clawed frog)	NP_001123822.1
	Gg, Gallus gallus (chicken)	XP_015152891.1
	Mm, Mus musculus (house mouse),	NP_061213.2
	Dr, Danio rerio (zebrafish)	NP_001035339.2
	Fp, Falco peregrinus (peregrine falcons)	NP_001123822.1
AGPAT9	Bt, Bos taurus (cattle)	NP_001179443.1
	Xt, Xenopus (Silurana) tropicalis (western clawed frog)	NP_001087492.1
	Gg, Gallus gallus (chicken)	NP_001026316.1
	Mm, Mus musculus (house mouse),	NP_766303.1
Dr, Danio rerio (zebrafish)	NP_001002685.1	

Table S1.c. The species names and NCBI accession numbers of LPIN family for the phylogenetic tree construction

Gene	Species	NCBI accession numbers
LPIN1	Hs, Homo sapiens (human)	NP_001336136.1
	Dr, Danio rerio (Zebrafish)	NP_001037818.1
	Gg, Gallus gallus (chicken)	XP_015131575.1
	Mm, Mus musculus (house mouse),	NP_001123884.1
	Xt, Xenopus (Silurana) tropicalis (western clawed frog)	XP_005234551.1
	Fp, Falco peregrinus (peregrine falcons)	XP_005238227.1
	Bt, Bos taurus (cattle)	NP_001193085.2
LPIN2	Gg, Gallus gallus (chicken)	NP_001006386.2
	Hs, Homo sapiens (human)	NP_055461.1
	Mm, Mus musculus (house mouse),	NP_001158357.1
	Dr, Danio rerio (zebrafish)	XP_005163511.1
	Xt, Xenopus (Silurana) tropicalis (western clawed frog)	NP_001072517.1
	Bt, Bos taurus (cattle)	XP_010817245.1
	Fp, Falco peregrinus (peregrine falcons)	XP_013153869.1

Table S2 List of the genes and primers used for qRT-PCR validation

Gene name	Forward primer(5'-3')	Reward primer(5'-3')	PCR product
<i>ApoVLDLII</i>	CAATGAAACGGCTAGACTCA	AACACCGACTTTTCTTCCAA	108
<i>β-actin</i>	GAGAGAAGATGACACAGATC	GTCCATCACAATACCAGTGG	116
<i>GPAM</i>	TCCATCGAGACCTAATGATAC	TAGACATCACAGCACAGGAC	182
<i>GPAT2</i>	GTTTTCTCTCCACCCACAAG	CTCAATGCCTGTCCACTCTC	155
<i>AGPAT2</i>	CACCGTCAAGAACATGAGGA	ACCTCCATCAGCCCCATCAT	165
<i>AGPAT3</i>	AAGACCCAGTTCATTGTTC	ACCACCATTCCAGCAGCATT	180
<i>AGPAT4</i>	CAGTGGCATAACCTGGAGCA	CAGCACACCCAGCTGTTTTTC	246
<i>AGPAT5</i>	CTGGCACCCATCTCAGTGTT	CAGGTGAGAGGACGCACAT	148
<i>AGPAT6</i>	CGTTCCTGATCAGCTTG	CGTCAATGGGGATGTGTGA	213
<i>AGPAT9</i>	GACCGCCATCTAGTGACAAA	GAACGCATCTCCAAACTGA	189
<i>LPIN1</i>	TAATGAGAGACAAGATGCC	ATCTTTTATTCTGTTTGCCAT	165
<i>LPIN2</i>	CCACATCTCCAATACCACT	AGTCTCTGTTTCCATAGCAT	122