



Supplement of

Identification, molecular characteristics, and tissue differential expression of *DGAT2* full-CDS cDNA sequence in Binglangjiang buffalo (*Bubalus bubalis*)

Fangting Zhou et al.

Correspondence to: Yongwang Miao (yongwangmiao1@126.com)

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Table S1. Information of homologous sequences of DGAT2 for sequence similarity and phylogenetic analysis

sequence type	species	GenBank accession number	data sources	length/bp
coding sequences	<i>Mus musculus</i>	NM_026384	NCBI database	1167
	<i>Bos taurus</i>	NM_205793		1086
	<i>Sus scrofa</i>	NM_001160080		1086
	<i>Capra hircus</i>	NM_001314305		1086
	<i>Gorilla gorilla</i>	XM_004051835		1167
	<i>Bos mutus</i>	XM_005902498		1086
	<i>Pan paniscus</i>	XM_008967473		1116
	<i>Bison bison</i>	XM_010847556		1086
	<i>Felis catus</i>	XM_011286632		1086
	<i>Homo sapiens</i>	XM_011545304		1077
	<i>Bos indicus</i>	XM_019975405		1086
	<i>Canis lupus</i>	XM_025421879		1086
	<i>Ovis aries</i>	XM_027979550		1086
	<i>Pantholops hodgsonii</i>	XM_005954102		1086
amino acid sequences	<i>Mus musculus</i>	NP_080660	NCBI database	388
	<i>Bos taurus</i>	NP_991362		361
	<i>Sus scrofa</i>	NP_001153552		361
	<i>Capra hircus</i>	NP_001301234		361
	<i>Gorilla gorilla</i>	XP_004051883		388
	<i>Bos mutus</i>	XP_005902560		361
	<i>Pan paniscus</i>	XP_008965721		371
	<i>Bison bison</i>	XP_010845858		361
	<i>Felis catus</i>	XP_011284934		361
	<i>Homo sapiens</i>	XP_011543606		358
	<i>Bos indicus</i>	XP_019830964		361
	<i>Canis lupus</i>	XP_025277664		361
	<i>Ovis aries</i>	XP_027835351		361
	<i>Pantholops hodgsonii</i>	XP_005954164		361

Table S2. Data information for tissue differential expression of buffalo DGAT2 gene

tissues	relative expression levels (mean \pm standard error)		<i>P</i> values
	non-lactation	lactation	
heart	199.38 \pm 14.04	367.40 \pm 46.71	0.04
liver	143.93 \pm 10.30	187.53 \pm 23.35	0.04
mammary gland	45.00 \pm 6.00	60.00 \pm 8.23	0.04
muscle	60.11 \pm 10.45	14.97 \pm 1.87	0.02
spleen	0.97 \pm 0.02	0.37 \pm 0.08	0.05
lung	0.82 \pm 0.31	0.36 \pm 0.02	0.11
kidney	9.41 \pm 1.65	4.00 \pm 0.12	0.01
intestine	0.09 \pm 0.02	0.17 \pm 0.03	0.01
brain	1.01 \pm 0.19	1.01 \pm 0.14	0.99
rumen	0.18 \pm 0.01	0.25 \pm 0.02	0.02

Note: The values are the average values for each tissue in 3 lactating buffaloes or 3 non-lactating buffaloes.

		identity percent																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
divergence	1	98.6	98.6	98.6	98.6	98.3	98.9	94.5	97.8	95.6	98.1	97.8	98.9	97.8	97.8	1	<i>Bubalus bubalis</i>	
	2	1.4	1.4	100.0	100.0	100.0	97.5	98.1	93.6	97.0	95.0	97.8	97.0	98.1	97.0	97.0	2	<i>Bos taurus</i>
	3	1.4	0.0	1.4	100.0	100.0	97.5	98.1	93.6	97.0	95.0	97.8	97.0	98.1	97.0	97.0	3	<i>Bos indicus</i>
	4	1.5	0.0	0.0	1.5	100.0	97.4	98.0	96.8	96.8	94.8	97.7	96.8	98.0	96.8	96.8	4	<i>Bos mutus</i>
	5	1.4	0.0	0.0	0.0	1.4	97.5	98.1	93.6	97.0	95.0	97.8	97.0	98.1	97.0	97.0	5	<i>Bison bison bison</i>
	6	1.7	2.5	2.5	2.6	2.5	1.7	98.9	94.5	97.2	94.5	97.5	97.8	98.9	97.8	96.7	6	<i>Capra hircus</i>
	7	1.1	2.0	2.0	2.0	2.0	1.1	1.1	95.3	97.8	95.3	98.1	98.6	99.4	98.6	97.2	7	<i>Ovis aries</i>
	8	5.8	6.7	6.7	3.2	6.7	5.8	4.9	1.1	94.7	91.4	94.7	94.9	95.0	94.9	92.2	8	<i>Pan paniscus</i>
	9	2.3	3.1	3.1	3.2	3.1	2.8	2.3	5.5	1.1	95.0	98.6	98.1	97.8	98.1	98.1	9	<i>Felis catus</i>
	10	4.6	5.2	5.2	5.4	5.2	5.8	4.9	9.1	5.2	1.1	96.1	94.7	95.0	94.7	95.0	10	<i>Sus scrofa</i>
	11	2.0	2.3	2.3	2.3	2.3	2.5	2.0	5.5	1.4	4.0	1.1	98.1	98.1	98.1	97.8	11	<i>Canis lupus dingo</i>
	12	2.3	3.1	3.1	3.2	3.1	2.3	1.4	5.3	2.0	5.5	2.0	1.1	98.3	100.0	95.1	12	<i>Gorilla gorilla gorilla</i>
	13	1.1	2.0	2.0	2.0	2.0	1.1	0.6	5.2	2.3	5.2	2.0	1.7	1.7	98.3	97.2	13	<i>Pantholops hodgsonii</i>
	14	2.3	3.1	3.1	3.2	3.1	2.3	1.4	5.3	2.0	5.5	2.0	0.0	1.7	1.7	95.1	14	<i>Homo sapiens</i>
	15	2.3	3.1	3.1	3.2	3.1	3.4	2.8	8.3	2.0	5.2	2.3	5.1	2.8	5.1	1.1	15	<i>Mus musculus</i>
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		

Figure S1. Identity and divergence percentage of DGAT2 amino acid sequences among some species. The values above diagonal line represent the identity percentage, and the values below the diagonal represent divergence