

Discovery and characterization of functional modules associated with body weight in broilers

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Table S2: Published QTL/associations related to growth traits in the searched genomic regions. In bold are shown the QTL that included all candidate genes in the predefined distances.

SNP ID	GGA	Distance (bp)	Number of QTL	QTL (bp)*	QTL type	QTL IDs*
<i>rs13923872</i>	1	613,054	20	37,278,942 - 128,288,555	Chest width	16706
				18,054,807 - 171,631,116	Visceral fat weight	17319
				18,054,807 - 171,717,298	Total white fat weight	17332
				25,724,479 - 171,631,116	Subcutaneous neck fat weight	17325

				18,054,807 - 196,202,543	Body weight	1797
				37,278,942 - 133,528,161	Body weight (140 days)	55919
				18,054,807 - 171,631,116	Body weight (140 days)	17076
				18,054,807 - 171,631,116	Carcass weight	17110
				100,051,042 - 123,004,362	Breast muscle weight	9410
				2,420,814 - 171,631,116	Shank length	9409
				106,349,346 - 123,007,835	Carcass fat content	17119
				113,159,926 - 128,288,555	Shank weight	14341
				113,159,926 - 128,288,555	Femur weight	14342
				18,054,807 - 172,427,968	Spleen weight	1851
				18,054,807 - 171,631,116	Growth (70-105 days)	55937
				18,054,807 - 168,151,247	Abdominal fat weight	6858
				18,054,807 - 171,631,116	Shank length	9294
				113,159,926 - 115,848,566	Breast muscle weight	13385
				111,368,640 - 164,599,096	Body weight (35 days)	14355

				6,580,919 - 171,631,116	Subcutaneous fat thickness	14359
<i>rs312691174</i>	4	650,472	14	17,148,380 - 81,264,760	Body weight (168 days)	24875
				17,148,380 - 81,264,760	Body weight (21 days)	24842
				17,148,380 - 81,264,760	Body weight (336 days)	24883
				17,148,380 - 81,264,760	Body weight (42 days)	24855
				17,148,380 - 81,264,760	Average daily gain	24899, 24905, 24911
				17,148,380 - 81,264,760	Body weight (84 days)	24866
				17,148,380 - 81,264,760	Body weight (504 days)	24890
				4,964,691 - 87,025,255	Visceral fat weight	17321
				10,768,639 - 91,268,419	Average daily gain	24914
				18,357,474 - 31,942,137	Shank length	9295
				18,354,191 - 37,883,325	Thigh muscle weight	9395
				18,354,191 - 47,647,218	Drumstick and thigh muscle weight	13404
				17,148,380 - 81,264,760	Body weight (day of first egg)	14457, 14464, 14470
				17,148,380 - 81,264,760	Head percentage	15571
<i>rs15608447</i>	4	718,407	36	67,546,750 - 67,546,790	Body weight (28 days)	65710

				17,148,380 - 81,264,760	Body weight (168 days)	24875
				47,647,218 - 89,464,128	Body weight	200.820.152.016
				17,148,380 - 81,264,760	Body weight (21 days)	24842
				17,148,380 - 81,264,760	Body weight (336 days)	24883
				47,647,218 - 89,464,128	Carcass weight	2012
				17,148,380 - 81,264,760	Body weight (42 days)	24855
				17,148,380 - 81,264,760	Average daily gain	24899, 24905, 24911
				17,148,380 - 81,264,760	Body weight (84 days)	24866
				47,647,218 - 89,464,128	Liver weight	2017
				52,604,411 - 82,619,142	Growth (14-28 days)	12499
				17,148,380 - 81,264,760	Body weight (504 days)	24890
				48,804,413 - 85,154,534	Growth (28-42 days)	12500
				52,191,247 - 89,464,128	Abdominal fat percentage	9421
				48,404,949 - 82,619,142	Growth (0-14 days)	12498
				52,535,768 - 70,787,114	Shank length	9286
				49,665,708 - 85,877,678	Total white fat weight	17334

				30,906,204 - 83,247,658	Tibia width	2035
				61,970,484 - 83,247,658	Tibia width	2038
				62,452,715 - 89,022,456	Growth (42-56 days)	12501
				4,964,691 - 87,025,255	Visceral fat weight	17321
				62,331,035 - 82,550,230	Pectoralis major weight	2041
				31,561,525 - 89,318,267	Body weight (35 days)	55905
				32,974,594 - 89,318,267	Growth (0-35 days)	55930
				47,647,218 - 89,464,128	Drumstick muscle weight	2057
				10,768,639 - 91,268,419	Average daily gain	24914
				47,647,218 - 89,464,128	Drumstick weight	2059
				47,647,218 - 89,464,128	Wing weight	2060
				47,647,218 - 89,464,128	Body weight (42 days)	9759
				47,647,218 - 89,464,128	Body weight (63 days)	9760
				47,647,218 - 89,464,128	Growth (21-42 days)	9761
				47,647,218 - 89,464,128	Growth (42-63 days)	9762
				62,331,035 - 82,299,229	Shank length	11795

				47,647,218 - 89,464,128	Skin fat weight	12636
				47,647,218 - 89,464,128	Drumstick and thigh muscle weight	13395
				17,148,380 - 81,264,760	Body weight (day of first egg)	14457, 14464, 14470
<i>rs318199727</i>	10	737,906	11	13,330,009 - 13,330,034	Dressing percentage	57550
				13,330,009 - 13,330,034	Breast muscle percentage	57551
				13,329,989 - 13,330,029	Breast muscle percentage	57547
				13,329,989 - 13,330,029	Drumstick and thigh muscle percentage	57548
				13,329,989 - 13,330,029	Abdominal fat percentage	57549
				692,555 -20,423,025	Carcass weight	17113
				1,541,735 - 16,171,711	Body weight (140 days)	55923
				2,357,400 - 17,864,188	Body weight (35 days)	55907
				692,555 -20,423,025	Body weight (70 days)	55911
				2,552,841 - 18,059,263	Growth (0-35 days)	55931
				4,410,690 - 18,434,155	Body weight (105 days)	55917
<i>rs318098582</i>	11	300,257	9	1,133,281 - 19,983,730	Body weight (140 days)	55924
				18,193,544 - 20,208,550	Thigh meat-to-bone ratio	6736

				18,193,544 - 20,208,550	Body weight (40 days)	6737
				953,174 -20,208,550	Body weight (140 days)	17080
				6,823,128 - 20,208,550	Carcass weight	17114
				12,510,855 - 20,208,550	Carcass weight	17088
				6,910,612 - 20,208,550	Spleen weight	2287
				18,193,544 - 18,870,770	Body weight	2284, 2285
				18,642,683 - 18,686,657	Growth (8-46 days)	9519
<i>rs317945754</i>	15	935,183	21	3,731,712 -3,769,767	Spleen weight	2349
				3,731,712 -3,769,767	Body weight (42 days)	9727
				3,731,712 -3,769,767	Carcass weight	9728
				3,731,712 -3,769,767	Spleen percentage	12588
				2,812,987 - 10,689,472	Body weight (336 days)	24887
				4,236,686 -4,265,310	Abdominal fat weight	11995
				1,931,502 -7,215,657	Visceral fat weight	17323
				2,519,182 -7,215,657	Subcutaneous neck fat weight	17331
				3,749,008 -7,973,093	Drumstick and thigh percentage	15586
				3,749,008 -7,973,093	Abdominal fat weight	2337
				3,749,008 -7,973,093	Abdominal fat percentage	2339, 2340
				3,749,008 -8,228,905	Body weight (35 days)	3355
				1,931,502 -7,215,657	Total white fat weight	17337
				2,812,987 - 10,689,472	Liver weight	2348

				2,403,639 - 10,689,472	Abdominal fat percentage	9450
				1,931,502 - 10,689,472	Abdominal fat weight	9451
				2,812,987 - 10,689,472	Abdominal fat weight	2347, 12631
				3,749,008 - 10,689,472	Body weight (46 days)	6648
				3,749,008 - 10,689,472	Growth (8-46 days)	6649
				2,812,987 - 10,689,472	Fat distribution	12645
				1,931,502 -9,638,429	Breast muscle weight	9449
<i>rs316794400</i>	22	26,589	1	QTL: 3,625,173-4,599,266 bp could not be remapped from Gallus gallus 4 to Gallus gallus 5.0 assembly by NCBI Genome Remapping Service	Breast muscle percentage	95429
<i>rs317627533</i>	26	773,988	6	3,118,976 -4,116,802	Body weight (28 days)	95418
				1,263,919 -4,918,464	Body weight (63 days)	9453
				2,499,704 -4,918,464	Shank weight	2383
				4,610,791 -4,624,276	Liver percentage	2385

				QTL: 4,715,796-108,192,374 bp could not be remapped from Gallus gallus 4 to Gallus gallus 5.0 assembly by NCBI Genome Remapping Service	Abdominal fat weight	30883
				4,873,346 -4,886,832	Breast muscle weight	6957
<i>rs314452928</i>	27	140,067	3	QTL: 81,131-81,301 bp could not be remapped from Gallus gallus 4 to Gallus gallus 5.0 assembly by NCBI Genome Remapping Service	Growth (105-140 days)	55944
				54,597 -4,520,058	Growth (0-35 days)	55932
				54,597 -4,520,058	Body weight (35 days)	55906
<i>rs315329074</i>	27	998,553	65	3,834,510 -3,834,550	Shank length	66068, 66069, 66070
				3,363,708 -3,363,748	Shank length	66067
				3,971,422 -3,971,462	Shank circumference	66063
				3,564,173 -3,564,213	Shank circumference	66065
				3,624,903 -3,624,943	Shank circumference	66064, 66066
				3,869,461 -3,869,501	Shank length	66071
				3,456,748 -3,456,788	Abdominal fat weight	66072
				1,798,380 -3,707,375	Abdominal fat weight	11817, 11809

			1,798,380 -3,707,375	Abdominal fat percentage	11820
			1,798,380 -3,707,375	Carcass fat content	17135, 17126
			1,798,380 -3,707,375	Head percentage	15599
			1,798,380 -3,707,375	Body weight	2406, 2407
			1,798,380 -3,707,375	Body weight (1 day)	7178
			1,798,380 -3,707,375	Body weight (41 days)	7186
			1,365,641 -4,520,058	Humerus length	2397
			3,522,988 -3,534,446	Body weight (112 days)	9521
			3,522,988 -3,534,446	Body weight (200 days)	9522
			3,522,988 -3,534,446	Growth (46-112 days)	9523
			1,365,641 -4,520,058	Body weight	2410
			1,809,980 -3,707,375	Body weight (35 days)	3356
			1,809,980 -3,707,375	Abdominal fat percentage	3354
			1,798,380 -3,707,375	Carcass protein content, dry matter basis	17124
			1,798,380 -3,707,375	Carcass fat content, dry matter basis	17125
			3,701,574 -3,713,173	Body weight (42 days)	9775
			3,701,574 -3,713,173	Growth (21-42 days)	9776
			3,701,574 -3,713,173	Body weight (day of first egg)	14459, 14466, 14473
			3,701,574 -3,713,173	Body weight (168 days)	24878
			3,701,574 -3,713,173	Body weight (336 days)	24888
			3,701,574 -3,713,173	Body weight (504 days)	24892
			3,701,574 -3,713,173	Average daily gain	24907
			3,707,375 -3,968,049	Body weight	2404, 2405

			3,707,375 -4,520,058	Thigh weight	2411
			3,707,375 -4,520,058	Wing weight	2412
			3,788,374 -3,889,766	Drumstick and thigh weight	11920
			3,788,374 -3,889,766	Drumstick and thigh percentage	11921
			3,788,374 -3,889,766	Abdominal fat percentage	11934
			3,788,374 -3,889,766	Pectoralis major percent	11950
			3,204,318 -4,520,058	Shank weight	2413
			1,798,380 -3,707,375	Body weight (112 days)	6652
			1,798,380 -3,707,375	Body weight (200 days)	6653
			1,798,380 -3,707,375	Growth (46-112 days)	6654
			1,798,380 -3,379,175	Femur length	6778
			1,798,380 -3,707,375	Shank weight percentage	15567
			2,263,107 -4,520,058	Carcass weight	17116
			404,762 -4,520,058	Wing weight	17109
			2,780,009 -4,520,058	Body weight (105 days)	55918
			54,597 -4,520,058	Growth (0-35 days)	55932
			1,365,641 -4,520,058	Body weight	2409
			54,597 -4,520,058	Body weight (35 days)	55906
			2,454,458 -4,520,058	Body weight (140 days)	55926
			2,639,460 -4,520,058	Body weight (70 days)	55912
			3,707,375 -4,520,058	Body weight (35 days)	7159
			1,850,810 -4,520,058	Carcass weight	17090
			2,639,460 -4,520,058	Growth (35-70 days)	55936
			4,377,710 -4,389,305	Shank length	9288

				3,707,375 -4,520,058	Shank weight percentage	15595
				2,390,652 -4,520,058	Breast muscle weight	17096
				3,597,175 -4,520,058	Drumstick and thigh weight	17105
				3,707,375 -4,520,058	Intramuscular fat	3360
				2,141,304 -4,520,058	Body weight (140 days)	17084
				3,707,375 -4,520,058	Body weight	2408
				3,788,374 -5,629,582	Thigh percentage	30886
				5,159,872 -5,171,472	Body weight (56 days)	12395
				5,159,872 -5,171,472	Body weight (hatch)	16623
				5,159,872 -5,171,472	Body weight (300 days)	16624
<p>*Note: The positions of QTL were remapped to Gallus_gallus-5.0 genome assembly using NCBI database (https://www.ncbi.nlm.nih.gov/genome/tools/remap)</p>						

