

1 **Additional file**

2 **Table S1.** SNPs distribution in QTL associated with FCR

| Chr <sup>a</sup> | Position  | -log <sub>10</sub> (P) | Candidate      | Dis(Kb) <sup>b</sup> | QTL          | Dis(Mb) <sup>c</sup> |
|------------------|-----------|------------------------|----------------|----------------------|--------------|----------------------|
| 1                | 45294365  | 5.23                   | FGD6           | intro19              | 33.28- 47.37 | within               |
| 1                | 45352736  | 5.66                   | VEZT           | intro11              | 33.28- 47.37 | within               |
| 1                | 45439962  | 5.92                   | USP44          | U2.389               | 33.28- 47.37 | within               |
| 1                | 45471662  | 5.68                   | NTN4           | intro1               | 33.28- 47.37 | within               |
| 1                | 45582623  | 5.81                   | LTA4H          | U1.72                | 33.28- 47.37 | within               |
| 1                | 45616618  | 6.40                   | ELK3           | U5.164               | 33.28- 47.37 | within               |
| 1                | 102706431 | 5.18                   | ADAMTS5        | U263.685             | NA           | NA                   |
| 1                | 103029989 | 5.32                   | uc_338         | U197.969             | NA           | NA                   |
| 1                | 106462834 | 5.10                   | DSCR3          | U5.608               | NA           | NA                   |
| 1                | 123749382 | 5.19                   | ARHGAP6        | intro9               | NA           | NA                   |
| 1                | 142580034 | 5.08                   | FGF14          | intro3               | NA           | NA                   |
| 1                | 185326516 | 5.14                   | SLC36A4        | intro8               | NA           | NA                   |
| 2                | 44336526  | 5.54                   | TRAK1          | intro2               | NA           | NA                   |
| 2                | 99687785  | 5.05                   | ARHGAP28       | U110.023             | NA           | NA                   |
| 2                | 131217033 | 6.34                   | RSPO2          | U60.141              | NA           | NA                   |
| 3                | 89741021  | 5.20                   | CSMD1          | intro58              | NA           | NA                   |
| 4                | 15549128  | 5.38                   | STAG2          | intro13              | 18.24- 31.13 | D2.7                 |
| 4                | 15596919  | 5.97                   | IAP3           | U15.85               | 18.24- 31.13 | D2.65                |
| 4                | 16040593  | 6.87                   | SOWAHD         | U23.813              | 18.24- 31.13 | D2.2                 |
| 5                | 51216482  | 5.07                   | TMEM179        | U91.307              | NA           | NA                   |
| 5                | 51600899  | 5.30                   | ZBTB42         | U1.25                | NA           | NA                   |
| 8                | 1395613   | 6.16                   | CAMSAP2        | intro14              | 6.97- 7.84   | D5.57                |
| 8                | 1648014   | 5.45                   | NR5A2          | intro3               | 6.97- 7.84   | D5.32                |
| 8                | 1839885   | 5.28                   | gga-mir-181a-1 | U146.801             | 6.97- 7.84   | D5.13                |
| 8                | 2123107   | 5.14                   | ATP6V1G3       | U12.048              | 6.97- 7.84   | D4.84                |
| 8                | 2273294   | 5.37                   | LHX9           | intro2               | 6.97- 7.84   | D4.69                |
| 8                | 2583927   | 7.14                   | ZBTB41         | intro5               | 6.97- 7.84   | D4.38                |
| 8                | 2717880   | 5.97                   | KCNT2          | intro4               | 6.97- 7.84   | D4.25                |
| 8                | 3155433   | 5.10                   | CDC73          | U229.314             | 6.97- 7.84   | D3.81                |
| 26               | 3202060   | 5.98                   | RAP1A          | U3.716               | 0.06- 2.54   | D0.66                |
| 26               | 3204278   | 5.49                   | FAM212B        | U5.055               | 0.06- 2.54   | D0.67                |

3 <sup>a</sup>chicken chromosome.

4 <sup>b</sup> D and U indicate the SNP is upstream and downstream of a gene, respectively.

5 <sup>c</sup> D and U indicate the SNP is upstream and downstream of a QTL, respectively.

6