**Supplementary Table 1.** Identification of BMD QTL intervals in chromosome 1 using MapMaker software.

Total vBMD	MapMaker QTL intervals (Mb)	LOD score
BMD1-1	164.6-166.7	10.3
BMD1-2	171.6-174.76	11.2
BMD1-3	177.4.6-184.6	11.1

**BMD1-3** 177.4.6-184.6 11.1

We have performed a classical "two-point"/pairwise linkage analysis of our data using 12 markers along the initial BMD QTL in Chr 1. The software determines the markers that are linked with each others and calculates the likelihood (LOD score) of the presence of a QTL between each pair of markers.