



Evaluation of INDUSCHIP-1 and selected low-density SNP panel for imputation to higher density in Gir dairy cattle of Gujarat

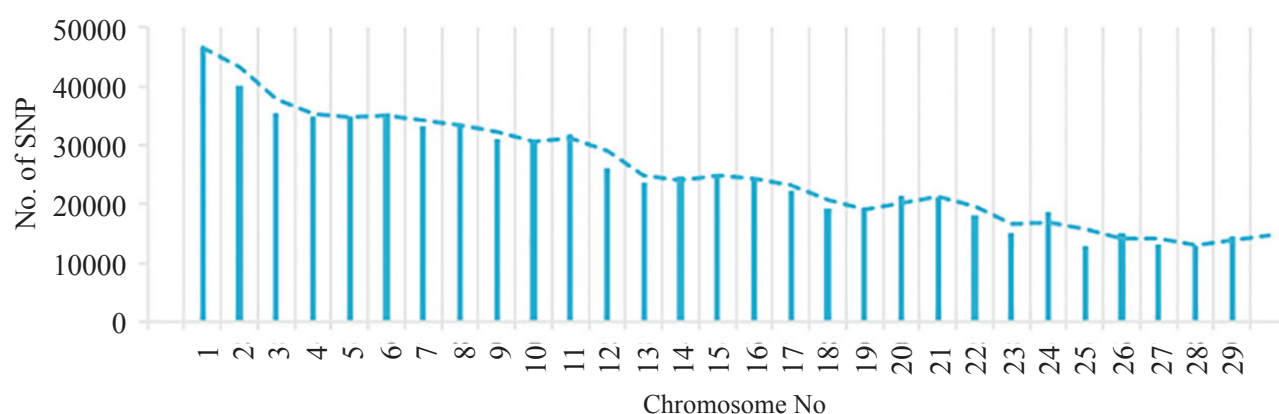
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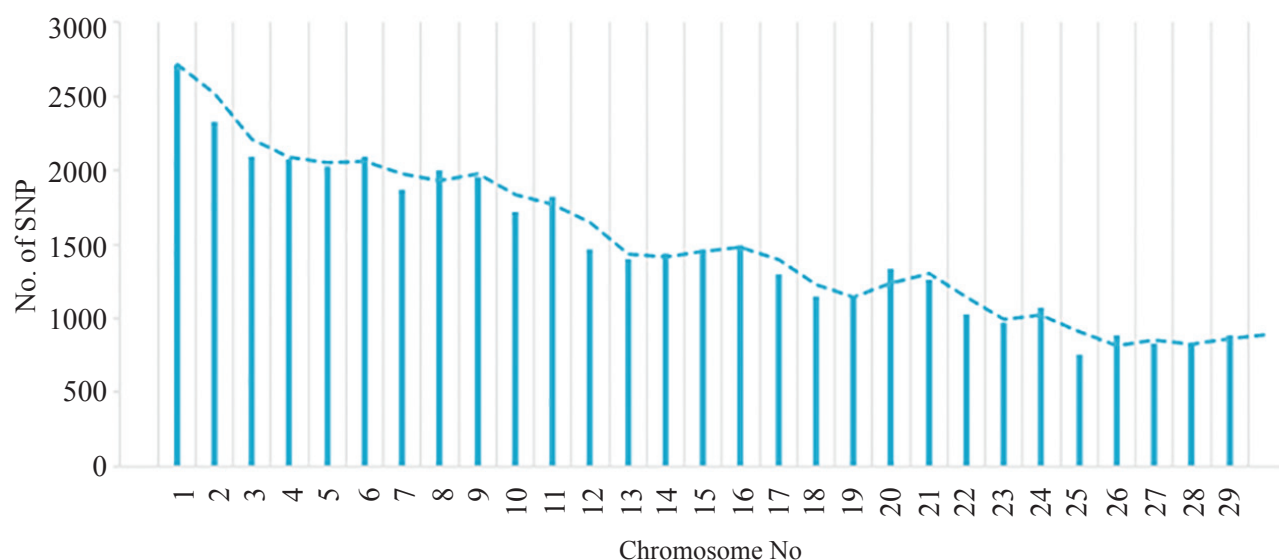
Supplementary Figures

Chromosome wise no. of SNPs in BovineHD



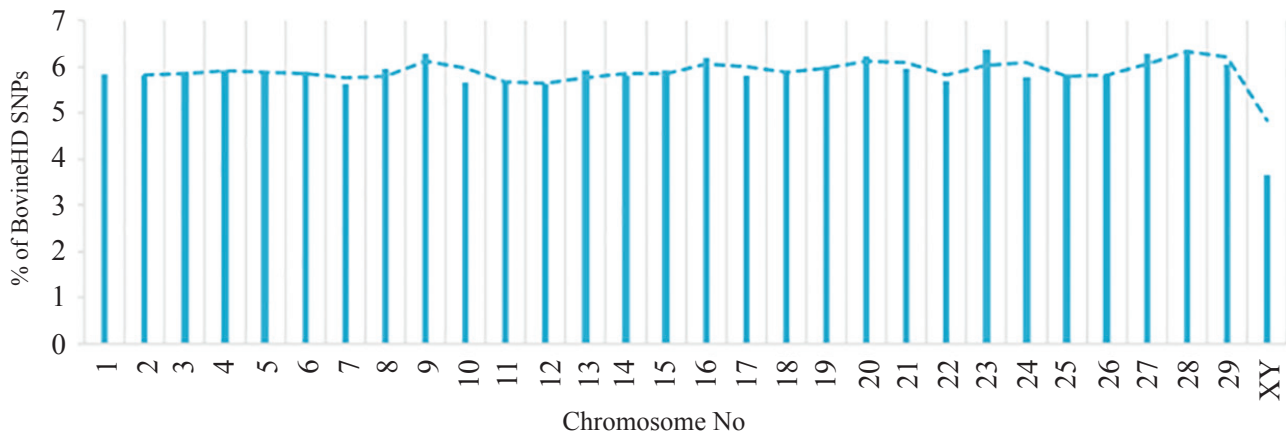
Supplementary Fig. 1A. Distribution of chromosome wise number of SNPs on Illumina BovineHD BreadChip [777k; High-density (HD)] in Gir breed.

Chromosome wise no. of SNPs in INDUSCHIP-1



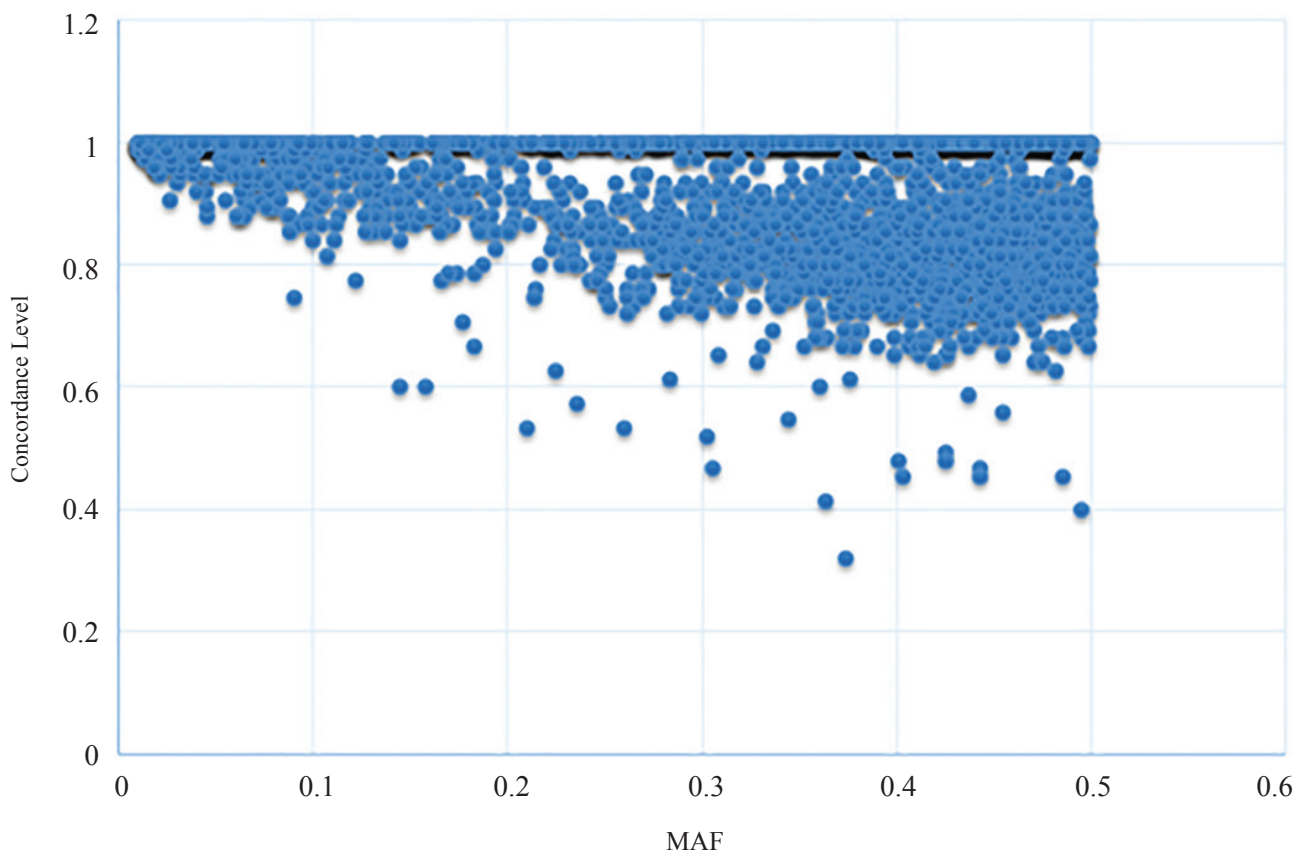
Supplementary Fig. 1B. Distribution of chromosome wise number of SNPs on INDUSCHIP-1 BreadChip [50k; Medium-density (MD)] in Gir breed.

Chromosome-wise % BovineHD SNPs on INDUSCHIP-1

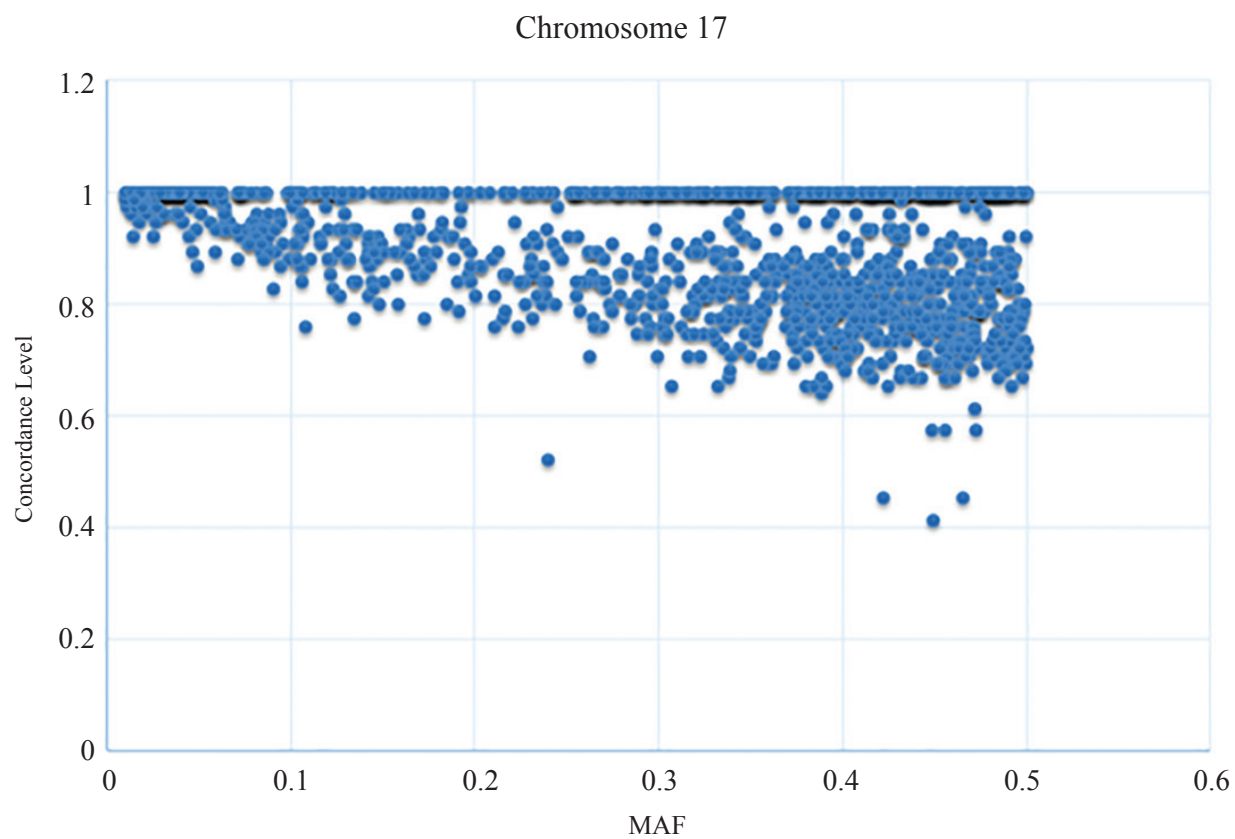


Supplementary Fig. 2. Distribution of chromosome-wise proportion SNPs on the Bovine HD [777k; High-density (HD)] chip is available on INDUSCHIP-1[50k; Medium Density (MD)].

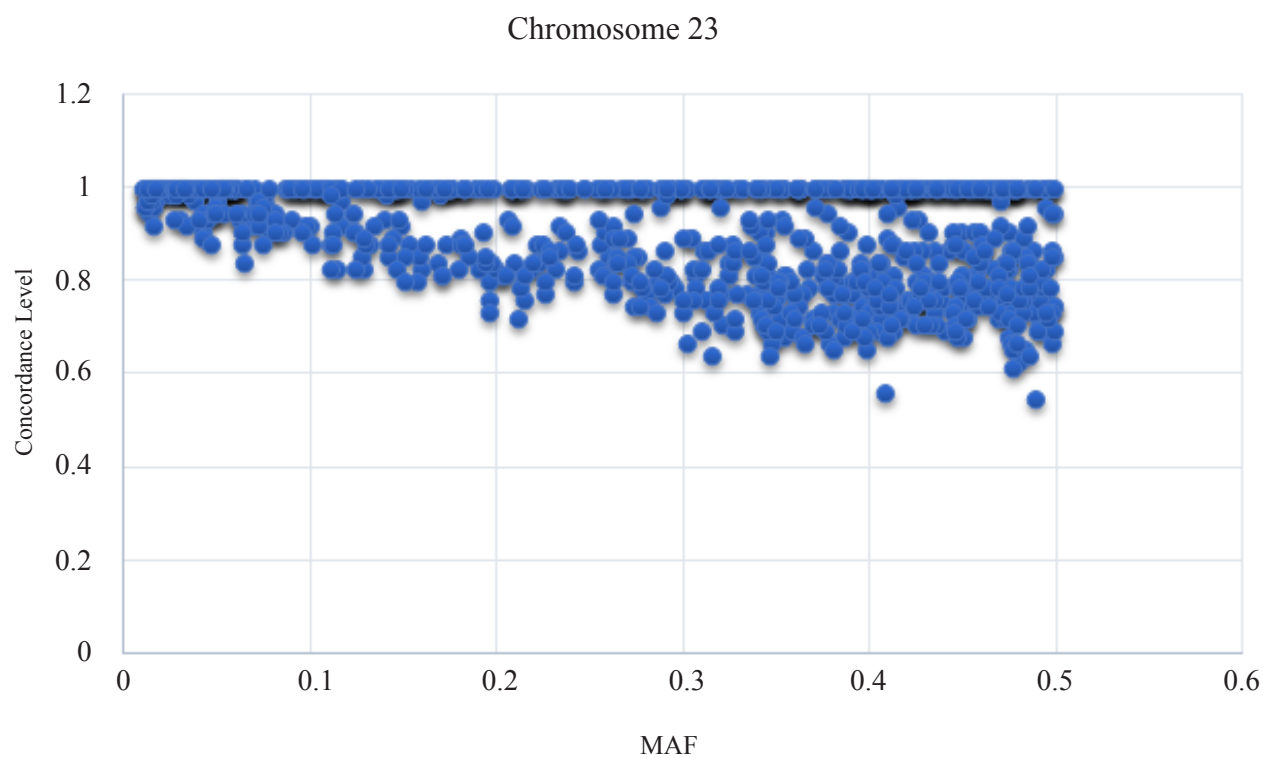
Chromosome 1



Supplementary Fig. 3. MAF wise concordance level for Chromosome 1.



Supplementary Fig. 4. MAF wise concordance level for Chromosome 17.



Supplementary Fig. 5. MAF wise concordance level for Chromosome 23.

Supplementary Tables

Supplementary Table 1. Fivefold cross-validation table for INDUSCHIP-1 to HD level Imputation

Chromosome No.	Test 1	Test 2	Test 3	Test 4	Test 5	Overall concordance
1	96.43%	93.23%	89.77%	93.53%	89.91%	92.57%
2	96.76%	94.06%	90.13%	93.00%	89.79%	92.75%
3	96.39%	92.75%	90.22%	92.94%	90.28%	92.51%
4	95.07%	94.35%	89.54%	91.63%	91.06%	92.33%
5	96.71%	93.53%	91.40%	92.71%	91.33%	93.13%
6	96.21%	92.55%	92.16%	94.33%	91.77%	93.40%
7	96.92%	93.22%	89.61%	93.13%	90.02%	92.58%
8	95.81%	92.95%	91.03%	94.54%	90.96%	93.06%
9	96.83%	92.95%	90.33%	93.47%	91.51%	93.02%
10	96.21%	91.54%	91.23%	91.94%	90.02%	92.19%
11	97.02%	92.43%	89.94%	92.41%	89.84%	92.33%
12	96.07%	93.25%	89.87%	92.90%	89.25%	92.27%
13	96.26%	93.18%	88.81%	92.03%	88.40%	91.74%
14	95.60%	93.15%	90.81%	91.52%	89.80%	92.18%
15	95.35%	92.84%	91.63%	93.55%	89.95%	92.66%
16	95.71%	93.60%	90.25%	93.56%	90.24%	92.67%
17	96.25%	93.29%	88.56%	92.72%	90.25%	92.21%
18	95.94%	91.60%	88.17%	91.93%	89.01%	91.33%
19	95.14%	92.39%	88.37%	92.34%	90.40%	91.73%
20	96.31%	93.12%	90.84%	93.80%	90.61%	92.94%
21	95.33%	92.63%	91.01%	93.25%	90.44%	92.53%
22	95.21%	92.12%	89.46%	91.70%	90.81%	91.86%
23	95.42%	92.69%	89.80%	93.68%	89.00%	92.12%
24	96.55%	93.02%	91.58%	92.27%	90.24%	92.73%
25	95.34%	92.58%	88.83%	90.55%	90.51%	91.56%
26	94.65%	92.69%	89.97%	90.94%	88.35%	91.32%
27	95.60%	92.02%	90.10%	93.58%	88.82%	92.02%
28	96.28%	90.82%	89.74%	91.33%	90.69%	91.77%
29	96.54%	93.74%	89.61%	92.36%	88.01%	92.05%

Mean concordance: 92.33%.

Supplementary Table 2. Fivefold cross-validation table for LD to INDUSCHIP-1 level (1019 animals)

Chromosome No.	Test 1	Test 2	Test 3	Test 4	Test 5	Overall concordance
1	88.64%	89.95%	88.99%	90.76%	89.22%	89.51%
2	88.97%	87.99%	89.07%	90.25%	86.72%	88.60%
3	88.28%	87.67%	89.16%	90.27%	87.44%	88.56%
4	88.49%	89.89%	88.11%	88.95%	89.04%	88.90%
5	89.11%	89.87%	88.96%	90.90%	89.81%	89.73%
6	89.36%	90.97%	89.39%	89.82%	88.18%	89.55%
7	88.35%	89.45%	87.69%	91.08%	89.82%	89.28%
8	88.39%	86.77%	88.18%	89.62%	89.02%	88.39%
9	89.90%	91.01%	88.82%	89.59%	87.82%	89.43%
10	87.63%	88.77%	89.14%	90.31%	87.32%	88.64%
11	88.78%	88.14%	88.44%	88.27%	87.98%	88.32%
12	89.32%	89.78%	87.16%	90.38%	87.64%	88.86%
13	89.23%	88.67%	89.73%	89.93%	87.18%	88.95%
14	88.34%	88.99%	85.99%	90.48%	86.96%	88.15%
15	89.08%	88.04%	90.10%	89.54%	87.73%	88.90%
16	88.92%	87.58%	86.67%	88.32%	87.77%	87.85%
17	87.91%	89.95%	86.10%	87.82%	87.77%	87.91%
18	88.16%	87.63%	86.71%	89.79%	88.94%	88.25%
19	86.71%	89.25%	85.34%	89.05%	85.61%	87.19%
20	89.04%	90.41%	88.03%	90.35%	89.30%	89.43%
21	89.08%	89.00%	87.95%	91.83%	86.51%	88.87%
22	87.20%	86.67%	86.25%	86.41%	85.20%	86.35%
23	88.49%	88.90%	87.20%	90.17%	88.24%	88.60%
24	86.38%	89.95%	89.47%	89.92%	87.75%	88.69%
25	86.85%	88.93%	87.11%	87.69%	88.61%	87.84%
26	86.65%	87.18%	86.50%	89.34%	84.96%	86.93%
27	86.96%	89.34%	88.27%	89.03%	86.91%	88.10%
28	86.52%	88.48%	86.13%	88.48%	85.76%	87.07%
29	87.07%	89.43%	87.60%	87.53%	85.34%	87.39%

Mean concordance: 88.42%.

Supplementary Table 3. Fivefold cross-validation table for LD Panel to INDUSCHIP-1 level (117 animals)

Chromosome No.	Test 1	Test 2	Test 3	Test 4	Test 5	Overall concordance
1	90.18%	85.41%	83.58%	84.59%	82.90%	85.33%
2	90.34%	86.76%	83.69%	85.33%	82.71%	85.77%
3	91.67%	86.41%	85.00%	85.84%	83.83%	86.55%
4	87.38%	88.55%	83.21%	82.15%	83.51%	84.96%
5	91.96%	87.63%	85.89%	85.50%	84.78%	87.15%
6	90.87%	85.48%	84.96%	88.27%	84.86%	86.89%
7	92.50%	86.04%	82.38%	84.01%	83.94%	85.77%
8	89.24%	84.98%	83.25%	86.05%	82.24%	85.15%
9	92.01%	85.85%	83.15%	85.71%	84.36%	86.22%
10	90.54%	84.27%	84.55%	84.03%	82.20%	85.12%
11	91.14%	83.99%	82.24%	83.77%	83.00%	84.83%
12	88.24%	86.07%	84.64%	85.05%	82.29%	85.26%
13	90.11%	85.94%	82.89%	84.34%	81.96%	85.05%
14	90.86%	87.24%	84.56%	83.43%	82.42%	85.70%
15	89.63%	86.14%	86.55%	86.77%	82.79%	86.37%
16	87.93%	86.17%	82.98%	85.87%	82.50%	85.09%
17	89.36%	85.76%	80.25%	83.50%	81.74%	84.12%
18	91.14%	85.70%	81.84%	84.91%	83.15%	85.35%
19	89.70%	85.72%	84.16%	86.77%	84.01%	86.07%
20	91.16%	86.56%	85.23%	87.36%	85.28%	87.12%
21	89.87%	86.43%	85.90%	87.28%	82.94%	86.48%
22	88.64%	84.92%	83.08%	83.63%	83.07%	84.67%
23	89.56%	86.60%	84.29%	86.42%	82.32%	85.84%
24	90.55%	85.70%	85.79%	83.12%	83.68%	85.77%
25	89.30%	87.99%	82.43%	84.29%	83.19%	85.44%
26	88.28%	84.85%	82.72%	81.92%	81.68%	83.89%
27	88.89%	84.71%	83.87%	85.92%	82.14%	85.10%
28	89.58%	82.53%	82.13%	82.17%	83.73%	84.03%
29	89.31%	85.96%	82.10%	83.80%	79.19%	84.07%

Mean concordance: 85.49%.