**Table S1.** Association analysis between CNV of *ZNF146* gene and different growth traits of Pinan Cattle

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chinese Cattle  Breed | Growth  Traits | CNV Types (Average ± Standard Error) | | | | | | *P*-value |
| **Deletion** | | **Normal** | **Duplication** | | |  |
| **CN=0(n=22)** | **CN=1(n=0)** | **CN=2(n=11)** | **CN=3(n=12)** | **CN=4(n=11)** | **CN≥5(n=27)** |  |
| Pinan cattle | WH (cm) | 124±1.4 | 0 | 125±2.2 | 127±1.9 | 123±1.9 | 126±1.2 | 0.561 |
| BL (cm) | 149±2.0 | 0 | 152±3.5 | 149±3.5 | 145±3.0 | 148±2.1 | 0.752 |
| HHC (cm) | 131±1.3 | 0 | 132±2.0 | 134±2.1 | 129±2.1 | 133±1.3 | 0.332 |
| HG (cm) | 173±2.4 | 0 | 176±5.0 | 178±5.6 | 169±3.8 | 177±2.7 | 0.491 |
| HW (cm) | 45.1±0.95 | 0 | 47±1.2 | 47±1.6 | 44±1.5 | 46.4±0.77 | 0.352 |
| RL (cm) | 48.9±0.72 | 0 | 49±1.3 | 48±1.3 | 47±1.3 | 48.4±0.75 | 0.682 |

WH, Withers height; BL, Body length; HHC, Height hip cross; HG, Heart girth; HW, Hip width; RL, Rump length

Note: There was no significant difference in the same letters on the shoulder mark (*P* > 0.05), but there was significant difference in the different letters on the shoulder mark (*P\** < 0.05).

**Table S2.** Association analysis between CNV of *ZNF146* gene and different growth traits of Xianan Cattle

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chinese Cattle  Breed | Growth  Traits | CNV Types (Average ± Standard Error) | | | | | | *P*-value |
| Deletion | | Normal | | Duplication | |  |
| CN=0(n=4) | CN=1(n=4) | CN=2(n=9) | CN=3(n=3) | CN=4(n=9) | CN≥5(n=6) |  |
| Xianan cattle | WH (cm) | 136±1.4 | 137±1.3 | 138±1.1 | 134±2.7 | 135±2.7 | 137±1.7 | 0.793 |
| BL (cm) | 159±4.1 | 165±2.5 | 160±2.2 | 157±5.7 | 159±3.0 | 164.0±1.1 | 0.548 |
| HHC (cm) | 139.3±0.75 | 141±1.1 | 141±1.2 | 138±1.5 | 139±1.3 | 140.5±0.72 | 0.538 |
| HG (cm) | 194±5.6 | 204±3.3 | 200±3.1 | 193.0±6.8 | 192±3.6 | 204±2.5 | 0.123 |
| CCB (cm) | 19.5±0.87 | 21±1.1 | 20.8±0.74 | 18.7±0.33 | 19.9±0.54 | 21.8±0.31 | 0.113 |
| BW (cm) | 581±42.5 | 568±26.8 | 572±20.5 | 497±31.8 | 553±27.9 | 604±28.8 | 0.430 |

BL, Body length; HHC, Height hip cross; HG, Heart girth; CCB, Circumference of cannon bone; BW, Body weight

Note: There was no significant difference in the same letters on the shoulder mark (*P* > 0.05), but there was significant difference in the different letters on the shoulder mark (*P\** < 0.05).