Supplementary Material

Identification of polymorphisms in TYRP1, DCT and RAB38 genes and their association with coat color in alpacas

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**Supplementary Materials**- Table 3S. All polymorphisms identified in *TYRP1*, *DCT* and *RAB38* genes of alpacas.

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| --- | --- | --- | --- | --- |
| **Gene** | **Polymorphism** | **Aminoacidic change** | **Aminoacidic effect** | **P-value** |
| TYRP1 | 5’c.-62C>T | N/A | N/A | 0.1753 |
| TYRP1 | 5’c.-26C>T | N/A | N/A | 0.0007135 |
| TYRP1 | 5’c.-8C>T | N/A | N/A | 0.03482 |
| TYRP1 | c.7G>T | Ser/Ala | Polar to non-polar | 0.0002333 |
| TYRP1 | c.104C>T | Val/Ala | Non-polar | 0.007537 |
| TYRP1 | c.139C>T | Ser/Pro | Polar to non-polar | 1 |
| TYRP1 | c.144G>A | Leu | N/A | 0.001281 |
| TYRP1 | c.228C>T | Ser | N/A | 0.7809 |
| TYRP1 | c.259A>C | Arg | N/A | 0.01233 |
| TYRP1 | c.400T>C | Leu | N/A | 6.104e-05 |
| TYRP1 | c.768C>T | Asn | N/A | 0.01503 |
| TYRP1 | c.785C>G | Arg/Thr | Basic to polar | 0.1865 |
| TYRP1 | c.825C>A | Thr | N/A | 0.5933 |
| TYRP1 | c.1000G>A | Thr/Ala | Polar to non-polar | 1 |
| TYRP1 | c.1139C>T | Val/Ala | Non-polar | 1 |
| TYRP1 | c.1305C>T | Asn | N/A | 0.0005913 |
| TYRP1 | c.1443T>C | Ile | N/A | 4.877e-07 |
| TYRP1 | c.1503T>C | Ile | N/A | 1 |
| TYRP1 | c.1506T>C | Arg | N/A | 1 |
| TYRP1 | c.1581A>G | Glu | N/A | 0.004798 |
| TYRP1 | c.1607T>C | Thr/Met | Polar to non-polar | 1 |
| TYRP1 | 3’ +12DelA | N/A | N/A | 0.6714 |
| DCT | 5’c.-20G>A | N/A | N/A | 0.0004691 |
| DCT | c.56C>A | Gln/Pro | Polar to non-polar | 1 |
| DCT | c.166G>A | Asn/Asp | Polar to acid | 0.03446 |
| DCT | c.168C>T | Asp | N/A | 4.318e-09 |
| DCT | c.226G>A | Ile/Val | Non-polar | 0.001796 |
| DCT | c.471T>G | Val | N/A | 0.007173 |
| DCT | c.480G>A | Thr | N/A | 0.01297 |
| DCT | c.501T>C | Leu | N/A | 0.003929 |
| DCT | c.546T>C | Tyr | N/A | 2.234e-07 |
| DCT | c.660C>T | His | N/A | 5.01e-05 |
| DCT | c.894G>A | Leu | N/A | 0.0001657 |
| DCT | c.972C>T | Asp | N/A | 0.03612 |
| DCT | c.1102C>T | Phe/Leu | Non-polar | 0.2826 |
| DCT | c.1113G>A | Leu | N/A | 0.06006 |
| DCT | c.1119T>C | His | N/A | 0.1688 |
| DCT | c.1191T>C | Ser | N/A | 0.1533 |
| DCT | c.1323T>C | Asn | N/A | 0.2456 |
| DCT | c.1417A>G | Val/Ile | Non-polar | 0.05984 |
| DCT | 3’ +2T>A  | N/A | N/A | 8.734e-07 |
| DCT | 3’ +26G>A  | N/A | N/A | 0.5691 |
| DCT | 3’ +35T>C  | N/A | N/A | 0.3036 |
| DCT | 3’ +36G>T | N/A | N/A | 2.114e-06 |
| RAB38 | c.408C>T | Leu | N/A | 1 |
| RAB38 | c.546T>C | Cys | N/A | 0.01378 |
| RAB38 | c.592G>A | Thr/Ala | Non-polar | 0.03852 |
| RAB38 | 3’ +14G>A  | N/A | N/A | 0.02285 |
| RAB38 | 3’ +85T>C  | N/A | N/A | 0.02296 |
| RAB38 | 3’ +107C>A  | N/A | N/A | 1 |