

Supplementary Materials

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LC717976.1      GCTGGGTCTTCATTGCTGTGTTTCAGGCTTTCTCTAGTTGGGGCAAGCGAGGGCTATTCTC 60
B              GCTGGGTCTTCATTGCTGTGTTTCAGGCTTTCTCTAGTTGGGGCAAGCGAGGGCTATTCTC 60
AD             GCTGGGTCTTCATTGCTGTGTTTCAGGCTTTCTCTAGTTGGGGCAAGCGAGGGCTATTCTC 60
*****

LC717976.1      TAGTTGCGATGTGCAGCCTTCTGCAGGTGGCTTCTCTTGTTCAGAGCCGGGGCTCTGGG 120
B              TAGTTGCGATGTGCAGCCTTCTGCAGGTGGCTTCTCTTGTTCAGAGCCGGGGCTCTGGG 120
AD             TAGTTGCGATGTGCAGCCTTCTGCAGGTGGCTTCTCTTGTTCAGAGCCGGGGCTCTGGG 120
*****

LC717976.1      TGCACAGGCTTCAGTTGTTGTGGCTTGAAGCTCTAGAGCACAGGCTCAGTGGTCGTGGCG 180
B              TGCACAGGCTTCAGTTGTTGTGGCTTGAAGCTCTAGAGCACAGGCTCAGTGGTCGTGGCG 180
AD             TGCACAGGCTTCAGTTGTTGTGGCTTGAAGCTCTAGAGCACAGGCTCAGTGGTCGTGGCG 180
*****

LC717976.1      CACAGGCTTACTCCACGGCATGTGGGATCTTCCCTGGCCAGGGAGCGAACCCTGTCCCC 240
B              CACAGGCTTACTCCATGGCATGTGGGATCTTCCCTGGCCAGGGAGCGAACCCTGTCCCC 240
AD             CACAGGCTTACTCCACGGCATGTGGGATCTTCCCTGGCCAGGGAGCGAACCCTGTCCCC 240
*****

LC717976.1      TGC GTT GCAAGGCGGCCTCTTAACCACTGGCCACCAGGGAAGCCCCAAGATGCCAAGGCT 300
B              TGC GTT GCAAGGCGGCCTCTTAACCACTGGCCACCAGGGAAGCCCCAAGATGCCAAGGCT 300
AD             TGC GTT GCAAGGCGGCCTCTTAACCACTGGCCACCAGGGAAGCCCCAAGATGCCAAGGCT 300
*****

LC717976.1      TTTTACTTCTGGTTCTTACCGTCTGGTTAATACAATTCCCTTCATCAGCCAGTCA 354
B              TTTTACTTCTGGTTCTTACCGTCTGGTTAATACAATTCCCTTCATCAGCCAGTCA 354
AD             TTTTACTTCTGGTTCTTACCGTCTGGTTAATACAATTCCCTTCATCAGCCAGTCA 354
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Figure S1. Representative DNA sequence alignment for a segment of CDS of *CAST* gene (354-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|LC717976.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

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AH014693.2      ACTGGTTTGGACTTCATCCCTGGGCTCCACCCTCTCCTGAGTTTGTCCAAGATGGACCAG 60
B              ACTGGTTTGGACTTCATCCCTGGGCTCCACCCTCTCCTGAGTTTGTCCAAGATGGACCAG 60
AD             ACTGGTTTGGACTTCATCCCTGGGCTCCACCCTCTCCTGAGTTTGTCCAAGATGGACCAG 60
*****

AH014693.2      ACATTGGCAATCTACCAACAGATCCTCGCCAGTCTGCCTTCCAGAAATGTGATCCAAATA 120
B              ACATTGGCGATCTACCAACAGATCCTCGCCAGTCTGCCTTCCAGAAATGTGATCCAAATA 120
AD             ACATTGGCAATCTACCAACAGATCCTCGACAGTCTGCCTTCCAGAAATGTGATCCAAATA 120
*****

AH014693.2      TCTAATGACCTGGAGAACCTCCGGGACCTTCTCCACCTGCTGGCCGCTCCAGAGCTGC 180
B              TCTAATGACCTGGAGAACCTCCGGGACCTTCTCCACCTGCTGGCCGCTCCAGAGCTGC 180
AD             TCTAATGACCTGGAGAACCTCCGGGACCTTCTCCACCTGCTGGCCGCTCCAGAGCTGC 180
*****

AH014693.2      CCCTTGCCGAGGTTCAGGGCCCTGGAGAGCTTGGAGAGCCTGGGCGTCGTCCTGGAAGCC 240
B              CCCTTGCCGAGGTTCAGGGCCCTGGAGAGCTTGGAGAGCCTGGGCGTCGTCCTGGAAGCC 240
AD             CCCTTACCGCAGGTTCAGGGCCCTGGAGAGCTTGGAGAGCCTGGGCGTCGTCCTGGAAGCC 240
*****

AH014693.2      TCCCTCTACTCCACCGAGGTGGTGGCCCTGAGCCGGCTACAGGGGTCTCTACAGGACATG 300
B              TCCCTCTACTCCACCGAGGTGGTGGCCCTGAGCCGGCTACAGGGGTCTCTACAGGACATG 300
AD             TCCCTCTACTCCACCGAGGTGGTGGCCCTGAGCCGGCTACAGGGGTCTCTACAGGACATG 300
*****

AH014693.2      TTGCGGCAGCTGGACCTCAGCCCTGGGTGCTGAAGCCTTGAAGGCCTCTCTTCCCAAAGT 360
B              TTGCGGCAGCTGGACCTCAGCCCTGGGTGCTGAAGCCTTGAAGGCCTCTCTTCCCAAAGT 360
AD             TTGCGGCAGCTGGACCTCAGCCCTGGGTGCTGAAGCCTTGAAGGCCTCTCTTCCCAAAGT 360
****

AH014693.2      CCAGGGAAGAAACCTGAGCTTCTGGCTGTCTGCAGAAGAGAGCCTATGTGGGCATCCTTT 420
B              CCAGGGAAGAAACCTGAGCTTCTGGCTGTCTGCAGAAGAGAGCCTATGTGGGCATCCTTT 420
AD             CCAGGGAAGAAACCTGAGCTTCTGGCTGTCTGCAGAAGAGAGCCTATGTGGGCATCCTTT 420
*****

AH014693.2      ATGCAGGCCAGC      432
B              ATGCAGGCCAGC      432
AD             ATGCAGGCCAGC      432
*****

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Figure S2. Representative DNA sequence alignment for a segment of CDS of *LEP* gene (432-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|AH014693.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

XM_027958720.2	ATGGGAGCTGTTTCTCCCTCTTGCACTGGAGAGAAGAGTCACGCTGACTGTGTCCCTCATT	60
B	ATGGGAGCTGTTTCTCCCTCTTGCACTGGAGAGAAGAGTCACGCTGACTGTGTCCCTCATT	60
AD	ATGGGAGCTGTTTCTCCCTCTTGCACTGGAGAGAAGAGTCACGATGACTGTGTCCCTCATT	60

XM_027958720.2	TACAAATCAGAGACCGAGGGGGACAGAGACCACACTCCAGACACGGACTTCCTCGGATTTC	120
B	TACAAATCAGAGACCGAGGGGGACAGAGACCACCGCTCCAGACACGGACTTCCTCGGATTTC	120
AD	TACAAATCAGAGACCGAGGGGGACAGAGACCACACTCCAGACACGGACTTCCTCGGATTTC	120

XM_027958720.2	CCCACCAAGATGCTAACAGTGAAGAGGCTGGGAGGAAGCAACGCGTGTACCGCAGTGAC	180
B	CCCACCAAGATGCTAACAGTGAAGAGGCTGGGAGGAAGCAACGCGTGTACTGCAGTGAC	180
AD	CCCACCAAGATGCTAACAGTGAAGAGGCTGGGAGGAAGCAACGCGTGTACCGCAGTGAC	180

XM_027958720.2	CAGCTGGAGAAGATGGCCCTTTTCCAGTGCATGGAGGAGGTGGAGAAGTGCTTTCTGGAA	240
B	CAGCTGGAGAAGATGGCCCTTTTCCAGTGCATGGAGGAGGTGGAGAAGTGCTTTCTGGAA	240
AD	CAGCTGGAGAAGATGGCCCTTTTCCAGTGCATGGAGGAGGTGGAGAAGTGCTTTCTGGAA	240

XM_027958720.2	GAAAGTTCCGCTGAACAAGATTTCAGATCTGGAAAGAACCCAGGCAAGGAGCAAGCGTGG	300
B	GAAAGTTCCGCTGAACAAGATTTCAGATCTGGAAAGAACCCAGGCAAGGAGCAAGCGTGG	300
AD	GAAAGTTCTGGTGAACAAGATTTCAGATCTGGAAAGAACCCAGGCAAGGAGCAAGCGTGG	300

XM_027958720.2	TCCTCCCTGGCCTGCAGGAGACAGCACCCGCCCGCGGTGAAAGGACAGCGGCCCGCA	360
B	TCCTCCCTGGCCTGCAGGAGACAGCACCCGCCCGCGGTGAAAGGACAGCGGCCCGCA	360
AD	TCCTCCCTGGCCTGCAGGAGACAGCACCCGCCCGCGGTGAAAGGACAGCGGCCCGCA	360

XM_027958720.2	GCCGACGCCCTGGCACCOCCTGCGCCCTTTGACCACCGCATCGTGACGGCCAGGCA 416	
B	GCCGACGCCCTGGCACCOCCTGCGCCCTTTGACCACCGCATCGTGACGGCCAGGCA 416	
AD	GCCGACGCCCTGGCACCOCCTGCGCCCTTTGACCACCGCATCGTGACGGCCAGGCA 416	

Figure S3. Representative DNA sequence alignment for a segment of CDS of *MYLK4* gene (416-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_027958720.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

XM_042249577.1	GGTAACATTACCAAGCGGAAGTTTCGGGCTGATGAAGAAGGCCTACGAGCTGAGCGTGCT	60
B	GGTAACATTACCAAGCGGAAGTTTCGGGCTGATGAAGAAGGCCTACGAGCTGAGTGCTGCT	60
AD	GGTAACATTACCAAGCGGAAGTTTCGGGCTGATGAAGAAGGCCTACGAGCTGAGCGTGCT	60

XM_042249577.1	CTGCGACTGCGAGATCGCCCTCATCATCTTCAACAGCTCCAACCGCCTCTTCCAGTACGC	120
B	CTGCGACTGCGAGATCGCCCTCATCATCTTCAACAGCTCCAACCGCCTCTTCCAGTACGC	120
AD	CTGCGACTGCGAGATCGCCCTCATCATCTTCAACAGCTCCAACCGCCTCTTCCAGTACGC	120

XM_042249577.1	CAGCACCGACATGGACCGCGTCTTCTGAAGTACACGGAGTACAGCGAGCCTCAGGAGAG	180
B	CAGCACCGACATGGACCGCGTCTTCTGAAGTACACGGAGTACAGCGAGCCTCAGGAGAG	180
AD	CAGCACCGACATGGACCGCGTCTTCTGAAGTACACAGAGTACAGCGAGCCTCAGGAGAG	180

XM_042249577.1	CCGCACCAACGCCGACATCCTCGAGACACTGAAGCGGAGGGGTGTGGGCCTTGATGGACC	240
B	CCGCACCAACGCCGACATCCTCGAGACACTGAAGCGGAGGGGTGTGGGCCTTGATGGACC	240
AD	CCGCACCAACGCCGACATCCTCGAGACACTGAAGCGGAGGGGTGTGGGCCTTGATGGACC	240

XM_042249577.1	CGAGCTGGAGCCAGACGAGGGGCTTGAGGGGCCAGGAGAGAAGCTGCGGAGGCTGGCAGG	300
B	CGAGCTGGAGCCAGACGAGGGGCTTGAGGGGCCAGGAGAGAAGCTGCGGAGGCTGGCAGG	300
AD	CGAGCTGGAGCCAGACGAGGGGCTTGAGGGGCCAGGAGAGAAGCTGCGGAGGCTGGGAGG	300

XM_042249577.1	TGATGGGGGTGACCCAGCCTTGCCCCGGCCCCGGCTCTATCCCGCAGCCCCACTATGCC	360
B	TGATGGGGGTGACCCAGCCTTGCCCCGGCCCCGGCTCTATCCCGCAGCCCCACTATGCC	360
AD	TGATGGGGGTGACCCAGCCTTGCCCCGGCCCCGGCTCTATCCCGCAGCCCCACTATGCC	360

XM_042249577.1	CAGCCCAGACATGGTATATGGGGCACTGCCCCCACCAGCCTGTGAACCCACTGGACTTGG	420
B	CAGCCCAGACATGGTATATGGGGCACTGCCCCCACCAGCCTGTGAACCCACTGGACTTGG	420
AD	CAGCCCAGACATGGTATATGGGGCACTGCCCCCACCAGCCTGTGAACCCACTGGACTTGG	420

XM_042249577.1	GGAG 424	
B	GGAG 424	
AD	GGAG 424	

Figure S4. Representative DNA sequence alignment for a segment of CDS of *MEF2B* gene (424-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_042249577.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

NM_001009402.2	TGGGATGCCATCGACCTGGACAATCCCCAGGAGCCCCGGCCGGAGCGAGCGCCGCGCCCGG	60
B	TGGGATGCCATCGACCTGGACAATCCCCAGGAGCCCCGGCCGGAGCGAGCGCCGCGCCCGG	60
AD	TGGGATGCCATCGACCTGGACAATCCCCAGGAGCCCCGGCCGGAGCGAGCGCCGCGCCCGG	60

NM_001009402.2	TGCGCGACCGCCCGGCACGACCCAGCCCTCCCTCCTGAACACCCAGCCACGTGCCAGCGG	120
B	TGCGCGACCGCCCGGCACGACCCAGCCCTCCCTCCTGAACACCCAGCCACGTGCCAGCGG	120
AD	TGCGCGACCGCCCGGCACGACCCAGCCCTCCCTCCTGAACACCCAGCCACGTGCCAGCGG	120

NM_001009402.2	TTGCCGAGCCGTTCAGGGGAAACCTTCGGTGACCCCTAGCTTTGGGCTGGAATATCCCCGCG	180
B	TTGCCGAGCCGTTCAGGGGAAACCTTCGGTGACCCCTAGCTTTGGGCTGGAATATCCCCGCG	180
AD	TTGCCGAGCCGTTCAGGGGAAACCTTCGGTGACCCCTAGCTTTGGGCTGGAATATCCCCGCG	180

NM_001009402.2	TTCCCGAAGACGGAGACTCGGAGTTCGAAGCAGGGTGAACGGACATGGCGGGCTGGATCC	240
B	TTCCCGAAGACGGAGACTCGGAGTTCGAAGCAGGGTGAACGGACATGGCGGGCTGGATCC	240
AD	TTCCCGAAGACGGAGACTCGGAGTTCGAAGCAGGGTGAACGGACATGGCGGGCTGGATCC	240

NM_001009402.2	AGGCCAGCAGCTGCAGGGAGATGCCCTGCCCCAGATGCAGGTGCTATACGGGCAGCACT	300
B	AGGCCAGCAGCTGCAGGGAGATGCCCTGCCCCAGATGCAGGTGCTATACGGGCAGCACT	300
AD	AGGCCAGCAGCTGCAGGGAGATGCCCTGCCCCAGATGCAGGTGCTATACGGGCAGCACT	300

NM_001009402.2	TCCCCATCGAGGTCCGGCATTACTTGGCGCAGTGGATTGAGAGCCAGCCGTGGGATGCCA	360
B	TCCCCATCGAGGTCCGGCATTACTTGGCGCAGTGGATTGAGAGCCAGCCGTGGGATGCCA	360
AD	TCCCCATCGAGGTCCGGCATTACTTGGCGCAGTGGATTGAGAGCCAGCCGTGGGATGCCA	360

NM_001009402.2	TGACCTGGACAATCCCCAGGACCGGGCCAGGTACCCAGCTCCTGGAGGGCCTGGTGC	420
B	TGACCTGGACAATCCCCAGGACCGGGCCAGGTACCCAGCTCCTGGAGGGCCTGGTGC	420
AD	TGACCTGGACAATCCCCAGGACCGGGCCAGGTACCCAGCTCCTGGAGGGCCTGGTGC	420

NM_001009402.2	AGGAGTTGCAAAAGAGGCAGAGCACCAGTTCGGGGAAGACGGGTTCTTACTGAGATCA	480
B	AGGAGTTGCAAAAGAGGCAGAGCACCAGTTCGGGGAAGACGGGTTCTTACTGAGATCA	480
AD	AGGAGTTGCAAAAGAGGCAGAGCACCAGTTCGGGGAAGACGGGTTCTTACTGAGATCA	480

NM_001009402.2	AGCTGGGGCACTACGTCCACGTCAGCTCCAGAACACGTACGACCGCTGCCCATGGAGCT	540
B	AGCTGGGGCACTACGTCCACGTCAGCTCCAGAACACGTACGACCGCTGCCCATGGAGCT	540
AD	AGCTGGGGCACTACGTCCACGTCAGCTCCAGAACACGTACGACCGCTGCCCATGGAGCT	540

NM_001009402.2	GGTTGCGCTGCATTGCGCACATTCTGTACRAATGAACAGAGGCTGGTCCGAGAAGCCACCA	600
B	GGTTGCGCTGCATTGCGCACATTCTGTACRAATGAACAGAGGCTGGTCCGAGAAGCCACCA	600
AD	GGTTGCGCTGCATTGCGCACATTCTGTACRAATGAACAGAGGCTGGTCCGAGAAGCCACCA	600

NM_001009402.2	ATGGTAATTCTTCTGCTGGGATCCTGGTTGATGCCATGTCCCAG	644
B	ATGGTAATTCTTCTGCTGGGATCCTGGTTGATGCCATGTCCCAG	644
AD	ATGGTAATTCTTCTGCTGGGATCCTGGTTGATGCCATGTCCCAG	644

Figure S5. Representative DNA sequence alignment for a segment of CDS of *STAT5A* gene (644-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|NM_001009402.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

XR_006061143.1	TTAAGACTGAGGGAAGTGGGTGCTGGGAGCCCCACGCCCTTCCTTGAGGGCCCGGGAAGT	60
B	TTAAGACTGAGGGAAGTGGGTGCTGGGAGCCCCACGCCCTTCCTTGAGGGCCCGGGAAGT	60
AD	TTAAGACTGAGGGAAGTGGGTGCTGGGAGCCCCACGCCCTTCCTTGAGGGCCCGGGAAGT	60

XR_006061143.1	GAGCTGGGTCAAGCAGTCTCTGAGGTGGGTTTCCCCAACCAGCCAGCCAGGCAGGCAGA	120
B	GAGCTGGGTCAAGCAGTCTCTGAGGTGGGTTTCCCCAACCAGCCAGCCAGGCAGGCAGA	120
AD	GAGCTGGGTCAAGCAGTCTCTGAGGTGGGTTTCCCCAACCAGCCAGCCAGGCAGGCAGA	120

XR_006061143.1	AAGGAGACGGTGTCTCAGTGAGCACTTGGCCTGTCTCCCCATGGAGCCCCCTGCTTCTA	180
B	AAGGAGACGGTGTCTCAGTGAGCACTTGGCCTGTCTCCCCATGGAGCCCCCTGCTTCTA	180
AD	AAGGAGACGGTGTCTCAGTGAGCACTTGGCCTGTCTCCCCATGGAGCCCCCTGCTTCTA	180

XR_006061143.1	TGCCTTCTCTAAAACCTCCATCAGCCATCTACTTAGTATCAGATGGGGCTTGGGAAGCAG	240
B	TGCCTTCTCTAAAACCTCCATCAGCCATCTACTTAGTATCAGATGGGGCTTGGGAAGCAG	240
AD	TGCCTTCTCTAAAACCTCCATCAGCCATCTACTTAGTATCAGATGGGGCTTGGGAAGCAG	240

XR_006061143.1	GCCAGGGTCAGCCTGTGGGCCAGGGGAARACCCAGGACCTGGAGAATTGAGCTGGGCCCA	300
B	GCCAGGGTCAGCCTGTGGGCCAGGGGAARACCCAGGACCTGGAGAATTGAGCTGGGCCCA	300
AD	GCCAGGGTCAGCCTGTGGGCCAGGGGAARACCCAGGACCTGGAGAATTGAGCTGGGCCCA	300

XR_006061143.1	GCTTCCCATGTTTCTGATGCCCTTTGAGACGTGGCCAGGACAGGACACCAGCGGAGGGGAA	360
B	GCTTCCCATGTTTCTGATGCCCTTTGAGACGTGGCCAGGACAGGACACCAGCGGAGGGGAA	360
AD	GCTTCCCATGTTTCTGATGCCCTTTGAGACGTGGCCAGGACAGGACACCAGCGGAGGGGAA	360

XR_006061143.1	TGAAGTGTGGCCTGAGGGCAGAAGTTGCAGGGAGGAACCTGGAAGAATTGTCCTTGGTTC	420
B	TGAAGTGTGGCCTGAGGGCAGAAGTTGCAGGGAGGAACCTGGAAGAATTGTCCTTGGTTC	420
AD	TGAAGTGTGGCCTGAGGGCAGAAGTTGCAGGGAGGAACCTGGAAGAATTGTCCTTGGTTC	420

XR_006061143.1	CCCTCTTACGAGACGCAAGTACTCGAGAAAGGCACCCCTGCCAGCCTGAAGAAGTTCACC	480
B	CCCTCTTACGAGATGCAAGTACTCGAGAAAGGCACCCCTGCCAGCCTGAAGAAGTTCACC	480
AD	CCCTCTTACGAGACGCAAGTACTCGAGAAAGGCACCCCTGCCAGCCTGAAGAAGTTCACC	480

XR_006061143.1	TGAGGCACCTTCACAGG	496
B	TGAGGCACCTTCACAGG	496
AD	TGAGGCACCTTCACAGG	496

Figure S6. Representative DNA sequence alignment for a segment of CDS of *TRPV1* gene (496-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XR_006061143.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

XM_004018854.5	GTGCTTCGCCTTATATAAAGTGATTGGGGGCACACAGCCGTTCTCTCGAGTCACCCCCGC	60
B	GTGCTTCGCCTTATATAAAGTGATTGGGGGCACACAGCCGTTCTCTCGAGTCACCCCCGC	60
AD	GTGCTTCGCCTTATATAAAGTGATTGGGGGCACACAGCCGTTCTCTCGAGTCACCCCCGC	60

XM_004018854.5	GCAGCCTTCTTGTGGCGAGTGAGCCCGAGGAAGCCATTGCCTGCTCGGTGTTCTCTAATA	120
B	GCAGCCTTCTTGTGGCGAGTGAGCCCGAGGAAGCCATTGCCTGCTCGGTGTTCTCTAATA	120
AD	GCAGCCTTCTTGTGGCGAGTGAGCCCGAGGAAGCCATTGCCTGCTCGGTGTTCTCTAATA	120

XM_004018854.5	CCTGTGATTGTTATCCTTGAAGATGCCTGAGGAAGTGCACCATGGAGAGGAGGAGGTGGA	180
B	CCTGTGATTGTTATCCTTGAAGATGCCTGAGGAAGTGCACCATGGAGAGGAGGAGGTGGA	180
AD	CCTGTGATTGTTATCCTTGAAGATGCCTGAGGAAGTGCACCATGGAGAGGAGGAGGTGGA	180

XM_004018854.5	GACATTGCTTCCAGGCAGAAATTGCCCAACTCATGTCTCTTATTATCAACACCTTCTA	240
B	GACATTGCTTCCAGGCAGAAATTGCCCAACTCATGTCTCTTATTATCAATACCTTCTA	240
AD	GACATTGCTTCCAGGCAGAAATTGCCCAACTCATGTCTCTTATTATCAACACCTTCTA	240

XM_004018854.5	TTCCAACAAGGAAATTTTCTTCGGGAGTTGATCAGTAATGCTTCTGATGCCTTGGACAA	300
B	TTCCAACAAGGAAATTTTCTTCGGGAGTTGATCAGTAATGCTTCTGATGCCTTGGACAA	300
AD	TTCCAACAAGGAAATTTTCTTCGGGAGTTGATCAGTAATGCTTCTGATGCCTTGGACAA	300

XM_004018854.5	GATTGCTATGAAAGCCTGACAGACCCCTTCTAAATTGGACAGTGGTAAAGAGCTGAAAAT	360
B	GATTGCTATGAAAGCCTGACAGACCCCTTCTAAATTGGACAGTGGTAAAGAGCTGAAAAT	360
AD	GATTGCTATGAAAGCCTGACAGACCCCTTCTAAATTGGACAGTGGTAAAGAGCTGAAAAT	360

XM_004018854.5	TGACATCATCCCGAATCCCGAGGAGCGTACTCTGACTCTGGTAGACACGGGCATTGGCAT	420
B	TGACATCATCCCGAATCCCGAGGAGCGTACTCTGACTCTGGTAGACACGGGCATTGGCAT	420
AD	TGACATCATCCCGAATCCCGAGGAGCGTACTCTGACTCTGGTAGACACGGGCATTGGCAT	420

XM_004018854.5	GACCAAAGCTGATCTTGTAAATAATTGGGAACCAITGCCAAGTCTGGCACTAAAGCATT	480
B	GACCAAAGCTGATCTTGTAAATAATTGGGAACCAITGCCAAGTCTGGCACTAAAGCATT	480
AD	GACCAAAGCTGATCTTGTAAATAATTGGGAACCAITGCCAAGTCTGGCACTAAAGCATT	480

XM_004018854.5	TATGGAGGCTCTTCAGGCTGGTGCAGACATCTCCATGATTGGGCAG 526	
B	TATGGAGGCTCTTCAGGCTGGTGCAGACATCTCCATGATTGGGCAG 526	
AD	TATGGAGGCTCTTCAGGCTGGTGCAGACATCTCCATGATTGGGCAG 526	

Figure S7. Representative DNA sequence alignment for a segment of CDS of *HSP90AB1* gene (526-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_004018854.5|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

XM_027977443.2 B AD	ACTGCGGAGCCTAGGGCGACGGCAGAGCAGGATGGAGATCCCAGTGCCTGTGCAGCCGTC ACTGCGGAGCCTAGGGCGACGGCAGAGCAGGATGGAGATCCCAGTGCCTGTGCAGCCGTC ACTGCGGAGCCTAGGGCGACGGCAGAGCAGGATGGAGATCCCAGTGCCTGTGCAGCCGTC *****	60 60 60
XM_027977443.2 B AD	TTGGCTGCGCCGCGCCTCGGCCCTTTGGCTGGGCTGTGGCTCCCGGGCGCCTCTTCGA TTGGCTGCGCCGCGCCTCGGCCCTTTGGCTGGGCTGTGGCTCCCGGGCGCCTCTTCGA TTGGCTGCGCCGCGCCTCGGCCCTTTGGCTGGGCTGTGGCTCCCGGGCGCCTCTTCGA *****	120 120 120
XM_027977443.2 B AD	CCAGCGCTTCGGCGAGGGGCTGCTGGAGGCCGAGCTGGCTGGCTCTGGCCCTGCCGCGCT CCAGCGCTTCGGCGAGGGGCTGCTGGAGGCCGAGCTGGCTGGCTCTGGCCCTGCCGCGCT CCAGCGCTTCGGCGAGGGGCTGCTGGAGGCCGAGCTGGCTGGCTCTGGCCCTGCCGCGCT *****	180 180 180
XM_027977443.2 B AD	GGCCCCCTACTACCTGCGCGCACCCAGCGTGGCGCTGCCTACCGCCCAAGGTATCTACCGA GGCCCCCTACTACCTGCGCGCACCCAGCGTGGCGCTGCCTACCGCCCAAGGTATCTACCGA GGCCCCCTACTACCTGCGCGCACCCAGCGTGGCGCTGCCTACCGCCCAAGGTATCTACCGA *****	240 240 240
XM_027977443.2 B AD	CCCCGGGCATTTCTCGGTGCTGCTGGATGTGAACACTTCTCACCCGAGGAAATTGCCGT CCCCGGGCATTTCTCGGTGCTGCTGGATGTGAACACTTCTCACCCGAGGAAATTGCCGT CCCCGGGCATTTCTCGGTGCTGCTGGATGTGAACACTTCTCACCCGAGGAAATTGCCGT *****	300 300 300
XM_027977443.2 B AD	CAAGGTGGTTGGTGACCACGTGGAAGTTCATGCGCGTCACGAGGAGCGCCCGGATGAGCA CAAGGTGGTTGGTGACCACGTGGAAGTTCATGCGCGTCACGAGGAGCGCCCGGATGAGCA CAAGGTGGTTGGTGACCACGTGGAAGTTCATGCGCGTCACGAGGAGCGCCCGGATGAGCA *****	360 360 360
XM_027977443.2 B AD	CGGATACATTGCGCGCGAGTTCCACCGCCGCTACCGCTTGGCGCTGGTGTGGACCTGTC CGGATACATTGCGCGCGAGTTCCACCGCCGCTACCGCTTGGCGCTGGTGTGGACCTGTC CGGATACATTGCGCGCGAGTTCCACCGCCGCTACCGCTTGGCGCTGGTGTGGACCTGTC *****	420 420 420
XM_027977443.2 B AD	GGCCGTGACGCTCTGCGCTGTCCCTGAGGGCGTCCCTTCCATCCAGGCCGCACTTGGCC GGCCGTGACGCTCTGCGCTGTCCCTGAGGGCGTCCCTTCCATCCAGGCCGCACTTGGCC GGCCGTGACGCTCTGCGCTGTCCCTGAGGGCGTCCCTTCCATCCAGGCCGCACTTGGCC *****	480 480 480
XM_027977443.2 B AD	GGCCAGGCCCCACTGCACTGCGCGCCCGGGCGGCTGCCAAGTAGGGGTGAGGGCACAC GGCCAGGCCCCACTGCACTGCGCGCCCGGGCGGCTGCCAAGTAGGGGTGAGGGCACAC GGCCAGGCCCCACTGCACTGCGCGCCCGGGCGGCTGCCAAGTAGGGGTGAGGGCACAC *****	540 540 540
XM_027977443.2 B AD	CTGAACCTGGGAGCCGCTCAGCGCCCCCGCCCTTTCAAAGCCGACCTGACTCCGCCCA CTGAACCTGGGAGCCGCTCAGCGCCCCCGCCCTTTCAAAGCCGACCTGACTCCGCCCA CTGAACCTGGGAGCCGCTCAGCGCCCCCGCCCTTTCAAAGCCGACCTGACTCCGCCCA *****	600 600 600
XM_027977443.2 B AD	GCCAGGTGTCCCAGCGCGCGCCAAGACTA GCCAGGTGTCCCAGCGCGCGCCAAGACTA GCCAGGTGTCCCAGCGCGCGCCAAGACTA *****	630 630 630

Figure S8. Representative DNA sequence alignment for a segment of CDS of *HSPB6* gene (630-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_027977443.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

XM_027973370.2 B AD	GGCCTCTCTTTGCGGTTGCTACCTCCTCCTCTCCCGTCTCGCCCGGTATGGATCTGCCCG GGCCTCTCTTTGCGGTTGCTACCTCCTCCTCTCCCGTCTCGCCCGGTATGGATCTGCCCG GGCCTCTCTTTGCGGTTGCTACCTCCTCCTCTCCCGTCTCGCCCGGTATGGATCTGCCCG *****	60 60 60
XM_027973370.2 B AD	TGGGCCCGGGCGCGCGGGGCCAGCAACGTCCCGGCCCTTCTGACCAAGCTGTGGACTC TGGGCCCGGGCGCGCGGGGCCAGCAACGTCCCGGCCCTTCTGACCAAGCTGTGGACTC TGGGCCCGGGCGCGCGGGGCCAGCAACGTCCCGGCCCTTCTGACCAAGCTGTGGACTC *****	120 120 120
XM_027973370.2 B AD	TCGTGAGCGACCCGGACACGGACGCGCTCATCTGCTGGAGCCCGAGCGGGAACAGCTTCC TCGTGAGCGACCCGGACACGGACGCGCTCATCTGCTGGAGCCCGAGCGGGAACAGCTTCC TCGTGAGCGACCCGGACACGGACGCGCTCATCTGCTGGAGCCCGAGCGGGAACAGCTTCC *****	180 180 180
XM_027973370.2 B AD	ACGTGCTGGACACGGGCCAGTTTGCCAAGGAGGTGCTGCCCAAGTACTTCAAGCACAGCA ACGTGCTGGACACGGGCCAGTTTGCCAAGGAGGTGCTGCCCAAGTACTTCAAGCACAGCA ACGTGCTGGACACGGGCCAGTTTGCCAAGGAGGTGCTGCCCAAGTACTTCAAGCACAGCA *****	240 240 240
XM_027973370.2 B AD	ACATGGCTAGCTTCGTGCGGCAGCTCAACATGTATGGCTTCCGGAAGGTGGTCCACATCG ACATGGCTAGCTTCGTGCGGCAGCTCAACATGTATGGCTTCCGGAAGGTGGTCCACATCG ACATGGCTAGCTTCGTGCGGCAGCTCAACATGTATGGCTTCCGGAAGGTGGTCCACATCG *****	300 300 300
XM_027973370.2 B AD	AGCAGGGTGGCCTGGTCAAGCCAGAGAGGGACGACACCGAGTTCAGCACCCGTGCTTCC AGCAGGGTGGCCTGGTCAAGCCAGAGAGGGACGACACCGAGTTCAGCACCCGTGCTTCC AGCAGGGTGGCCTGGTCAAGCCAGAGAGGGACGACACCGAGTTCAGCACCCGTGCTTCC *****	360 360 360
XM_027973370.2 B AD	TGCGAGGCCAGGAGCAGCTCCTCGAGAACATCAAGAGGAAAGTGACCAAGCTGTCCACTC TGCGAGGCCAGGAGCAGCTCCTCGAGAACATCAAGAGGAAAGTGACCAAGCTGTCCACTC TGCGAGGCCAGGAGCAGCTCCTCGAGAACATCAAGAGGAAAGTGACCAAGCTGTCCACTC *****	420 420 420
XM_027973370.2 B AD	AGCTGATGAAGGGGAAGCAGGAGAGCATGGACTCCAAGCTGCTGGCCATGAAGCATGAGA AGCTGATGAAGGGGAAGCAGGAGAGCATGGACTCCAAGCTGCTGGCCATGAAGCATGAGA AGCTGATGAAGGGGAAGCAGGAGAGCATGGACTCCAAGCTGCTGGCCATGAAGCATGAGA *****	480 480 480

Figure S9. Representative DNA sequence alignment for a segment of CDS of *HSF1* gene (480-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_027973370.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

XM_042238340.1	GAATAACGGAGGCAGAGCCCTTCATTAACTGCTAAAACTCTACTGCACGAATGTGAAC	60
B	GAATAACGGAGGCAGAGCCCTTCATTAACTGCTAAAACTCTACTGCACGAATGTGAAC	60
AD	GAATAACGGAGGCAGAGCCCTTCATTAACTGCTAAAACTCTACTGCACGAATGTGAAC	60

XM_042238340.1	GATCCACGCCACGGCCCTCTACCTGAGAGGTTGAGCGAGGGTGTGCGTCTCCACCGAGG	120
B	GATCCACGCCACGGCCCTCTACCTGAGAGGTTGAGCGAGGGTGTGCGTCTCCACCGAGG	120
AD	GATCCACGCCACGGCCCTCTACCTGAGAGGTTGAGCGAGGGTGTGCGTCTCCACCGAGG	120

XM_042238340.1	AGATTGGCCAAGATATAATTAGAGCCTGTCTACCGAGCCCCAGCGCCTTCACCATCA	180
B	AGATTGGCCAAGATATAATTAGAGCCTGTCTACCGAGCCCCAGCGCCTTCACCGTCA	180
AD	AGATTGGCCAAGATATAATTAGAGCCTGTCTACCGAGCCCCAGCGCCTTCACCATCA	180

XM_042238340.1	CGCGGGATTGGGGACACCCAGAACCCAAATATTGGGACTCAGGGACGGGCCAGGGTGCGC	240
B	CGCGGGATTGGGGACACCCAGAACCCAAATATTGGGACTCAGGGACGGGCCAGGGTGCGC	240
AD	CGCGGGATTGGGGACACCCAGAACCCAAATATTGGGACTCAGGGACGGGCCAGGGTGCGC	240

XM_042238340.1	TCCCGAGGCCGATCCAAACGGTCACCCCACTGGCTGGGACCCCTGACACTCCGGCGAAGG	300
B	TCCCGAGGCCGATCCAAACGGTCACCCCACTGGCTGGGACCCCTGACACTCCGGCGAAGG	300
AD	TCCCGAGGCCGATCCAAACGGTCACCCCACTGGCTGGGACCCCTGACACTCCGGCGAAGG	300

XM_042238340.1	ACCAAGACTCAATGCCGCGGAGAGAAGCGAACTGCTTCAGACTGACTCGCCGACACCA	360
B	ACCAAGACTCAATGCCGCGGAGAGAAGCGAACTGCTTCAGACTGACTCGCCGACACCA	360
AD	ACCAAGACTCAATGCCGCGGAGAGAAGCGAACTGCTTCAGACTGACTCGCCGACACCA	360

XM_042238340.1	ACGGAAGAAGCGGCCCGGGCGGACCCACCAAACCCACACCTCAGAAACCACTGCAG	420
B	ACGGAAGAAGCGGCCCGGGCGGACCCACCAAACCCACACCTCAGAAACCACTGCAG	420
AD	ACGGAAGAAGCGGCCCGGGCGGACCCACCAAACCCACACCTCAGAAACCACTGCAG	420

XM_042238340.1	AGGGTGTCTGTGGCCTCGGACTCCCATAGCCACCGATGCTGTAAAAAGCCTACCCGTCT	480
B	AGGGTGTCTGTGGCCTCGGACTCCCATAGCCACCGATGCTGTAAAAAGCCTACCCGTCT	480
AD	AGGGTGTCTGTGGCCTCGGACTCCCATAGCCACCGATGCTGTAAAAAGCCTACCCGTCT	480

XM_042238340.1	CTTTGAAGGGCAGCAATTTAAACCTACCAGAGCAAGTGTCTGCAACCAACCGACCAATTG	540
B	CTTTGAAGGGCAGCAATTTAAACCTACCAGAGCAAGTGTCTGCAACCAACCGACCAATTG	540
AD	CTTTGAAGGGTAGCAATTTAAACCTACCAGAGCAAGTGTCTGCAACCAACCGACCAATTG	540

Figure S10. Representative DNA sequence alignment for a segment of CDS of *ST1P1* gene (540-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_042238340.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

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KP325220.1    CCTGCGTGGTGCATGGAAGTGATCTGAAGGACATGACTCCCGAGCAACTGGATGACATT 60
B             CCTGCGTGGTGCATGGAAGTGATCTGAAGGACATGACTCCCGAGCAACTGGATGACATT 60
AD            CCTGCGTGGTGCATGGAAGTGATCTGAAGGACATGACTCCCGAGCAGCTGGATGACATT 60
*****

KP325220.1    TGAAGTACCACACGGAGATTGTGTTGCCAGGACCTCTCCGAGCAGAAGCTCATCATT 120
B             TGAAGTACCACACGGAGATTGTGTTGCCAGGACCTCTCCGAGCAGAAGCTCATCATT 120
AD            TGAAGTACCACACGGAGATTGTGTTGCCAGGACCTCTCCGAGCAGAAGCTCATCATT 120
*****

KP325220.1    TGAAGGCTGCCAGAGACAGGTCGGCACACAGCTGGGGCGGGCTCTTTCAGACGCTGCTG 180
B             TGAAGGCTGCCAGAGACAGGTCGGCACACAGCTGGGGCGGGCTCTTTCAGACGCTGCTG 180
AD            TGAAGGCTGCCAGAGACAGGTCGGCACACAGCTGGGGCGGGCTCTTTCAGACGCTGCTG 180
*****

KP325220.1    GCCTGGCCTCAGTGTAGACAAAAAGCAAGGCAACAGTGTGAAACCTGAGCCAGCTAGC 240
B             GCCTGGCCTCAGTGTAGACAAAAAGCAAGGCAACAGTGTGAAACCTGAGCCAGCTAGC 240
AD            GCCTGGCCTCAGTGTAGACAAAAAGCAAGGCAACAGTGTGAAACCTGAGCCAGCTAGC 240
*****

KP325220.1    GCCTCTCTGTCTCAGTACACATGGGCCAGTAAGAAGCTCCAGGCGTAGAGGATGGTGAC 299
B             GCCTCTCTGTCTCAGTACACATGGGCCAGTAAGAAGCTCCAGGCGTAGAGGATGGTGAC 299
AD            GCCTCTCTGTCTCAGTACACATGGGCCAGTAAGAAGCTCCAGGCGTAGAGGATGGTGAC 299
*****

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Figure S11. Representative DNA sequence alignment for a segment of CDS of *ATP1A1* gene (299-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|KP325220.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

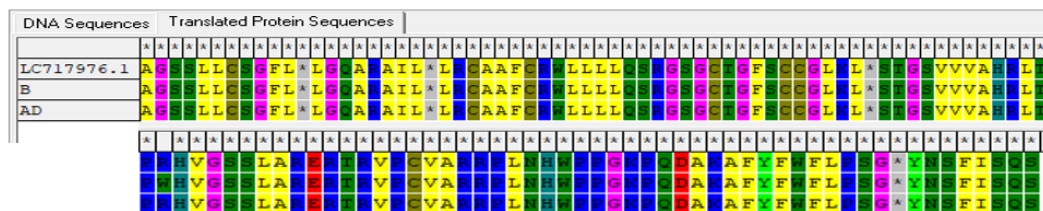


Figure S12. Representative amino acid sequence alignment of *CAST* gene (354-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|LC717976.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

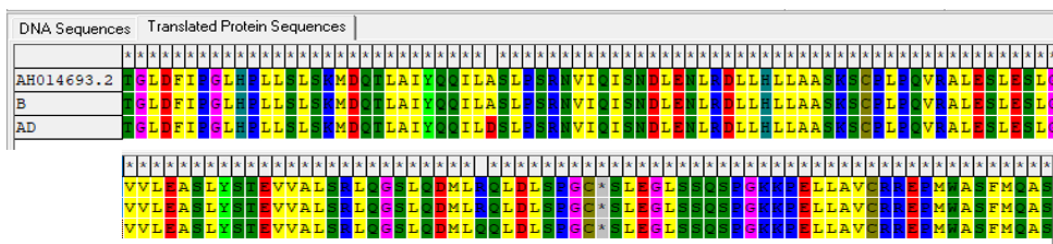


Figure S13. Representative amino acid sequence alignment of *LEP* gene (432-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|AH014693.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

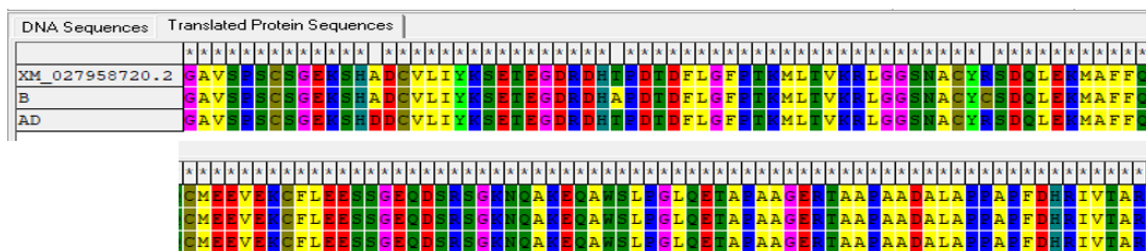


Figure S14. Representative amino acid sequence alignment of *MYLK4* gene (416-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_027958720.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

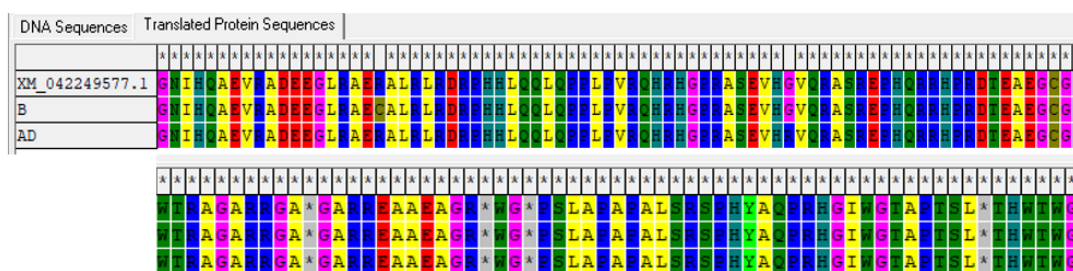


Figure S15. Representative amino acid sequence alignment of *MEF2B* gene (424-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_042249577.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

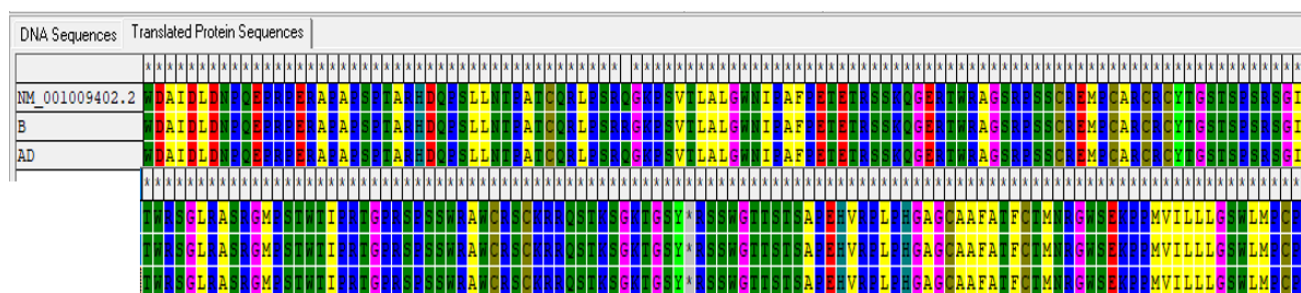


Figure S16. Representative amino acid sequence alignment of *STAT5A* gene (644-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|NM_001009402.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

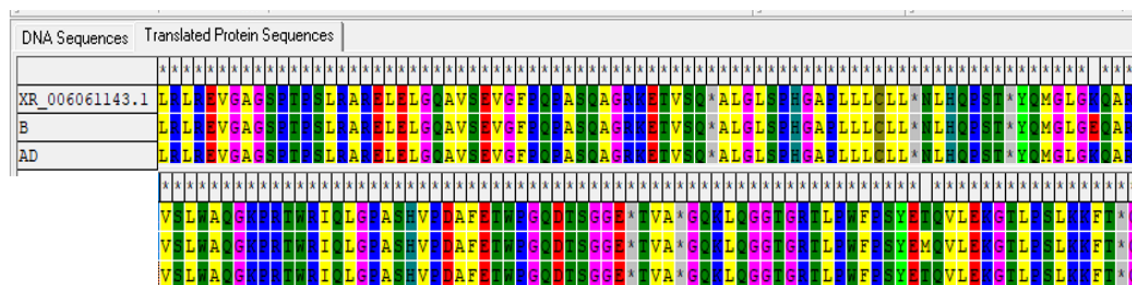


Figure S17. Representative amino acid sequence alignment of *TRPV1* gene (496-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XR_006061143.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

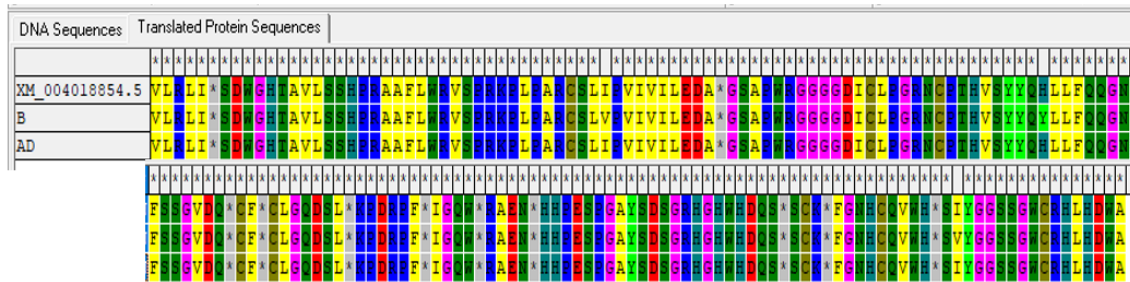


Figure S18. Representative amino acid sequence alignment of *HSP90AB1* gene (526-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_004018854.5|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

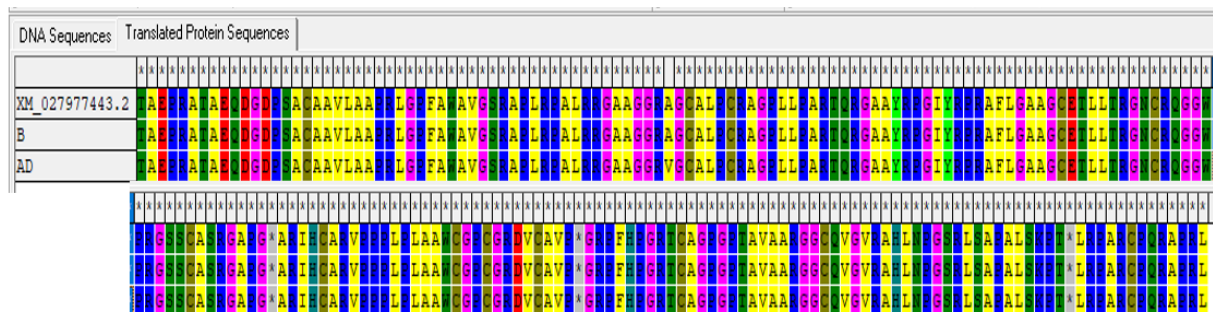


Figure S19. Representative amino acid sequence alignment of *HSPB6* gene (630-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_027977443.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

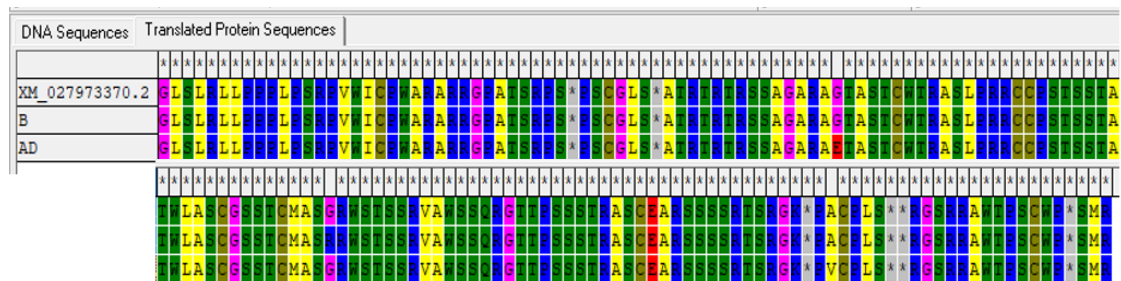


Figure S20. Representative amino acid sequence alignment of *HSF1* gene (480-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_027973370.2|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

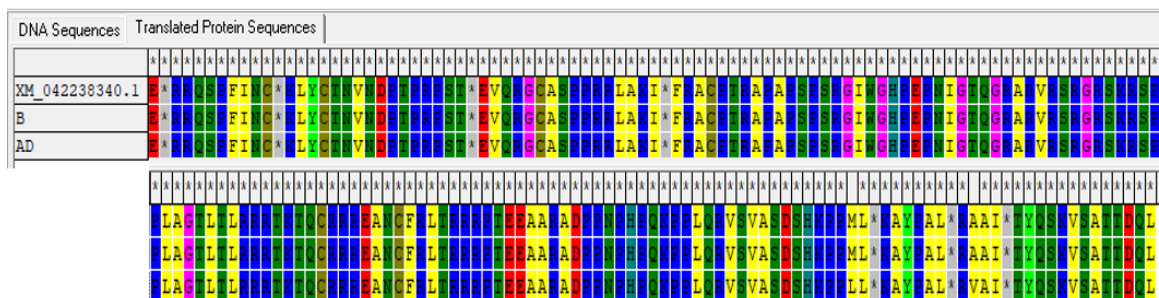


Figure S21. Representative amino acid sequence alignment of *ST1P1* gene (540-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|XM_042238340.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.

DNA Sequences										Translated Protein Sequences																			
KP325220.1	A	G	M	V	I	*	*	*	*	L	M	F	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
B	A	G	M	V	I	*	*	*	*	L	M	F	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
AD	A	G	M	V	I	*	*	*	*	L	M	F	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Figure S22. Representative amino acid sequence alignment of *ATP1A1* gene (299-bp) among Barki and Aboudeleik lambs and reference sequence available in the GenBank gb|KP325220.1|. B= Barki and AD= Aboudeleik. The asterisks represent the similarity.