

Supplementary Materials

Fig.S1 Electrophoretic patterns of PCR products of exon 2 of
Ovar-DRB1/DQB1 in Chinese Merino sheep

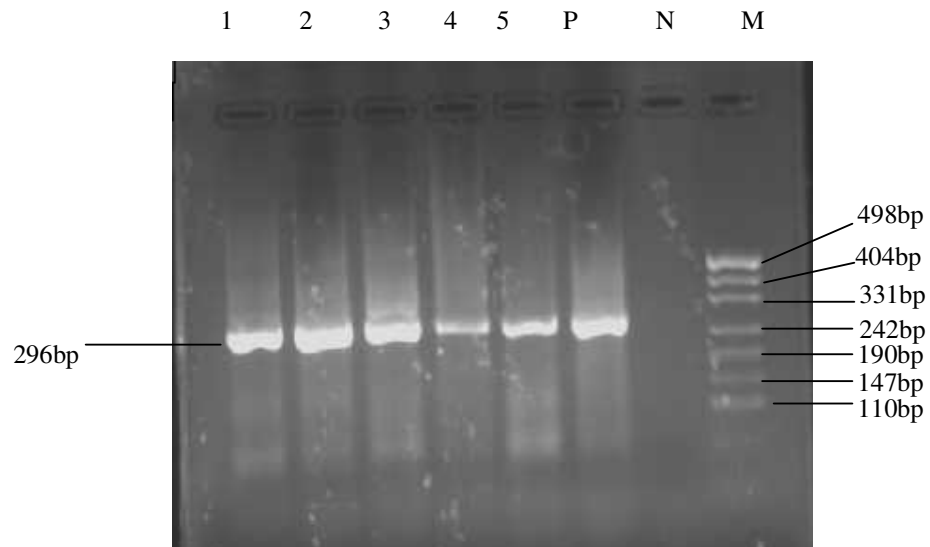


Fig.S1A. Electrophoretic patterns of PCR products of exon 2 of *Ovar-DRB1* in Chinese Merino sheep; M: pUC19 DNA marker. P: positive control N: negative control

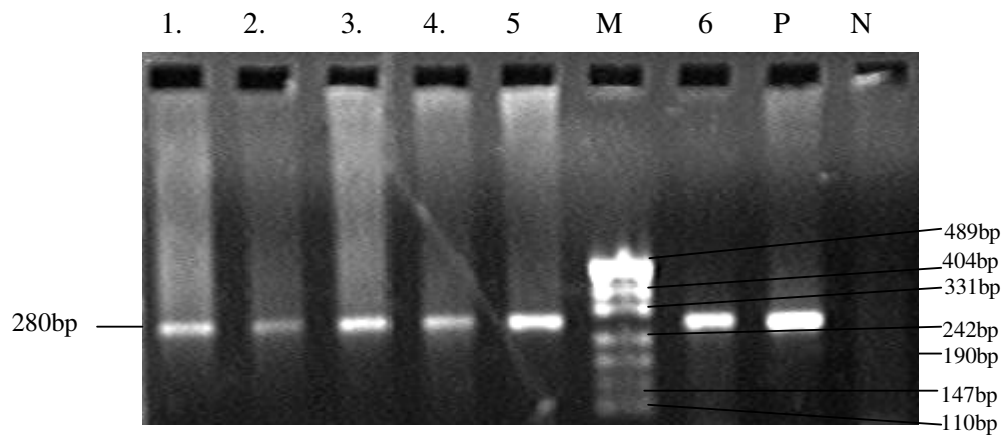


Fig.S1B. Electrophoretic patterns of PCR products of exon 2 of *Ovar-DQB1* in Chinese Merino sheep; M: pUC19 DNA marker. P: positive control; N: negative control

Fig.S1 10 μ l of *DRB1* exon 2 PCR product was digested with 5U of *Hin*1I
in Chinese Merino sheep, and then Samples were resolved by 1.5%
agarose gel electrophoresis

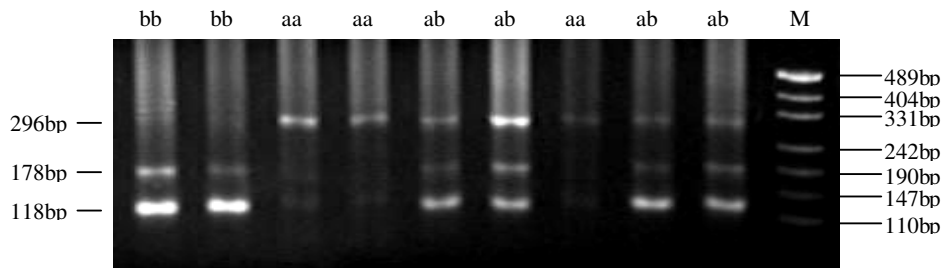


Fig.S1.E. Part results of electrophoretic patterns of exon 2 of MHC-*DRB1* digested with *Hin*1I in Chinese Merino sheep; M: pUC19 DNA marker.

Fig.S2 each 10 μ l of *DRB1* exon 2 PCR product was digested with 5U
*Sac*II, *Mro*xI, *Sca*I, *Nci*I respectively , The concentration of agarose gel
electrophoresis is at2.5%.while concentration of agarose gel
concentration of *Sca*I is 3%.

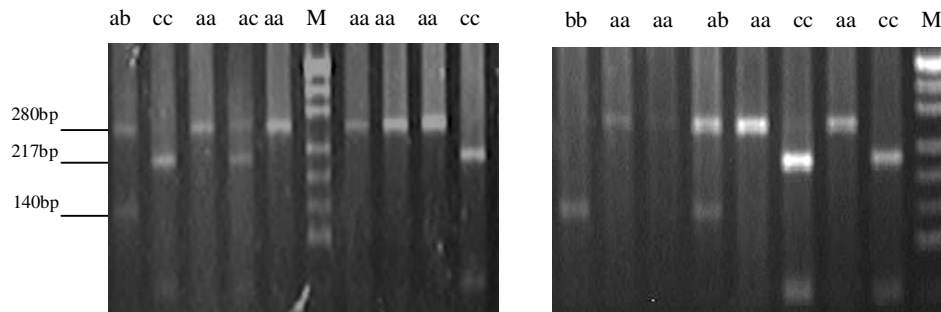


Fig.S2.D Part results of electrophoretic patterns of exon 2 of MHC-*DQB1* digested with *Sac*II in Chinese Merino sheep; M: pUC19 DNA marker.

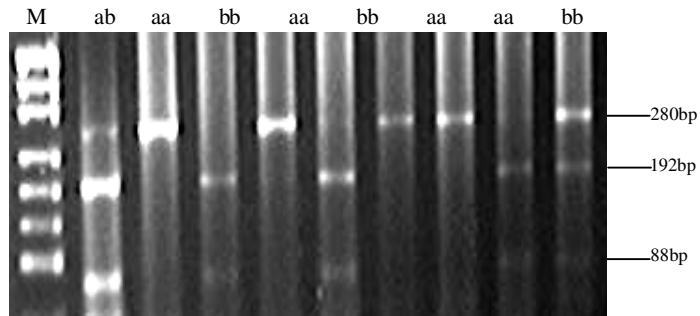


Fig.S2.E Part results of electrophoretic patterns of exon 2 of MHC-*DQB1* digested with *MroXI* in Chinese Merino sheep; M: pUC19 DNA marker.

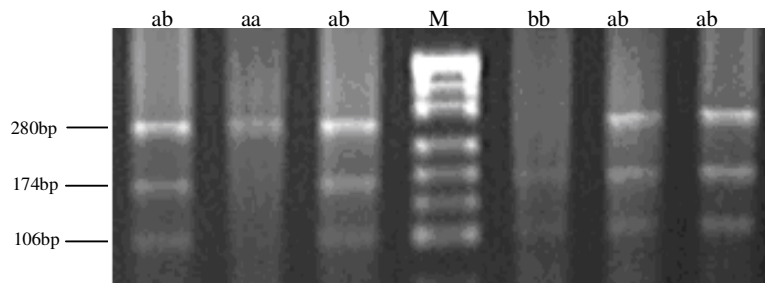


Fig.S2.F. Part results of electrophoretic patterns of exon 2 of MHC-*DQB1* digested with *ScaI* in Chinese Merino sheep; M: pUC19 DNA marker.

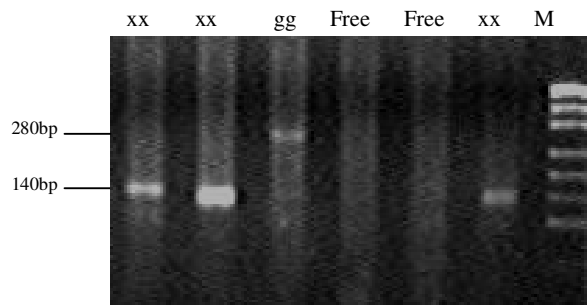


Fig.S2.G. Part results of electrophoretic patterns of exon 2 of MHC-*DQB1* digested with *NciI* in Chinese Merino sheep; M: pUC19 DNA marker.

FigS3. Comparison of MHC-*DQB1* sequences of sheep.

File: Multiple-Sequence-Alignment

Project:

Number: 3

Maxlength: 273

Names: Ovar-*DQB1* (origin) Ovar-*DQB1*-54-1_S Ovar-*DQB1*-74-1_S

Maxnamelen: 16

Features

Origin

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Ovar- DQB1 (origin) NATTTTCGTGCACCAGTTTAAGTGCCTGTGTTACTTCACCA 40
Ovar-DQB1-54-1_S   -- n-----t-----t a g-----a c-----40
Ovar-DQB1-74-1_S   -- n-----t t t---t-----t - g-----a-----40

Ovar- DQB1 (origin) ACGGGACGGAGCGGGTGCGGTACGTGACCAGATACATCTA 80
Ovar-DQB1-54-1_S   -----c--t-----80
Ovar-DQB1-74-1_S   -----a-g-t-----80

Ovar- DQB1 (origin) CAACCGGGGAGGAGTACGCGCGCTTCGACAGCGACTGGGAC 120
Ovar-DQB1-54-1_S   -----a-----t---t-----120
Ovar-DQB1-74-1_S   -----a-----t-----g---120

Ovar- DQB1 (origin) GAGTACCGCGGGGTGACGCCCGGGGCAGCGGGCAAGCCG 160
Ovar-DQB1-54-1_S   ----c-----g--c-----c-----t-----g---c--g--c-----160
Ovar-DQB1-74-1_S   -----g--c-----160

Ovar- DQB1 (origin) AGTACTGGAACAGCCAGAAGGACTTCCTGGAGCGGACGCG 200
Ovar-DQB1-54-1_S   -----a---a-----200
Ovar-DQB1-74-1_S   -----a-----200

Ovar- DQB1 (origin) GGCCGAGGTGGACACGGTGTCTGAGAAACAACTACCGGGTG 240
Ovar-DQB1-54-1_S   -----g-c-----c-----a-----240
Ovar-DQB1-74-1_S   -----c-----a-----g-c-----c-----a-----240

Ovar- DQB1 (origin) TATGCCCCCTTCACCTGGCAGCGGCGAGGTNN      272
  
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Ovar-*DQB1*-54-1_S g-a-----g-----n 272
 Ovar-*DQB1*-74-1_S g-a-----g-----n 272

Table.S1. Conditions of restriction enzymes and examination for PCR products of the exon 2 of MHC-*DRB1*/ *DQB1*

Table.S1A. Conditions of restriction enzymes and examination of digested PCR of the exon 2 of MHC-*DRB1*.

Restriction enzymes	Digest- temperature (°C)	Digest-time (h)	Concentration of agarose gel (%)	Recognition site
<i>SacI</i>	37	4	1.5	GAGCT*C
<i>HinII</i>	37	4	1.5	G (G/A) *CG (C/T) C
<i>HaeIII</i>	37	4	3	GG*CC
<i>SacII</i>	37	5	2.5	CC GC*GG
<i>MvaI</i>	37	8-12	3	CC* (A/T) GG

Note: * represents recognition site; / represents recognition of A or T.

Table.S1B. Conditions of restriction enzymes and examination of digested PCR product of exon 2 of MHC-*DQB1*.

Restriction enzymes	Digest- temperature (°C)	Digest-time (h)	Concentration of agarose gel (%)	Recognition site
<i>TaqI</i>	65	5	2.5	T*CGA
<i>MvaI</i>	37	5	2.5	CC* (A/T) GG
<i>HaeIII</i>	37	4	2.5	GG*CC
<i>MroXI</i>	37	4	2.5	GAANN*NNTTC
<i>ScaI</i>	38	6	3.0	AGT*ACT
<i>SacII</i>	37	4	2.5	CCGC*GG
<i>NciI</i>	37	5	2.5	GG (G/C) *CC

Note: * represents recognition site; / represents recognition of A or T.

Table S2. The genotypes of PCR-RFLP in exon 2 of the Ovar-*DRB1*/gene

Table S2A. The genotypes of PCR-RFLP in exon 2 of the Ovar-*DRB1* gene.

Restriction enzymes	The genotypes of each restriction enzyme			
<i>SacI</i>	aa(296bp)	ab(296bp/208bp/88bp)	bb(208bp/88bp)	
<i>HinI</i>	aa(296bp)	ab(296bp/178bp/118p)	bb(178bp/118bp)	
<i>SacII</i>	aa(296bp)	ab(296bp/229bp/69bp)	bb(229bp/69bp)	
<i>MvaI</i>	aa(296bp)	ac(296bp/210bp/86bp)	bb(123bp/87bp/86bp)	
	cc(210bp/86bp)	bc(210bp/123bp/87bp/86bp)		
<i>HaeIII</i>	aa(173bp/71bp/48bp/4bp)	bb(173bp/123bp)	cc(159bp/137bp)	dd(159bp/123bp/14bp)
	ee(159bp/71bp/66bp)	ff(159bp/71bp/52bp/14bp)	ab(173bp/123bp/71bp/48bp/4bp)	ac(173bp/159bp/137bp/71bp/48bp/4bp)
	ae(173bp/159bp/71bp/66bp/48bp/4bp)	bd(173bp/159bp/123bp/14bp)	be(173bp/159bp/123bp/71bp/66bp)	cd(159bp/137bp/123bp/14bp)
	ce(159bp/137bp/71bp/66bp)	df(159bp/123bp/71bp/52bp/14bp)	ef(159bp/71bp/66bp/52bp/14bp)	

Table.S2B. The genotypes of PCR-RFLP in exon 2 of the Ovar-*DQB1* gene.

Restriction enzymes	The genotypes of each restriction enzyme			
<i>TaqI</i>	aa(165bp/115bp)	bb(231bp/49bp)	ab(231bp/165bp/115bp/49bp)	ac(280bp/165bp/115bp)
<i>MroXI</i>	aa(280bp)	bb(192bp/88bp)	ab(280bp/192bp/88bp)	
<i>ScaI</i>	aa(280bp)	bb(174bp/106bp)	ab(280bp/174bp/106bp)	
<i>NciI</i>	gg(280bp)	xx(140bp)	xg(280bp/140bp)	
<i>SacII</i>	aa(280bp)	bb(140bp/140bp)	cc(217bp/63bp)	ab(280/140bp/140bp)
	ac(280bp/217bp/63bp)	bd(140bp/77bp/63bp)	ad(280bp/140bp/77bp/63bp)	
<i>HaeIII</i>	aa(213bp/67bp)	mm(127bp/67bp/52bp/34bp)	nn(179bp/67bp/34bp)	mn(179bp/127bp/67bp/52bp/34bp)
	am(213bp/179bp/67bp/34bp)	an(213bp/179bp/67bp/34bp)		
<i>MvaI</i>	aa(198bp/82bp)	bb(266bp/14bp)	cc(198bp/68bp/14bp)	dd(280bp)
	yy(150bp/96bp/20bp/14bp)	zz(102bp/96bp/48bp/20bp/14bp)	ad(280bp/198bp/82bp)	az(198bp/102bp/96bp/82bp/48bp/20bp/14bp)
	bc(266bp/198bp/68bp/14bp)	bd(280bp/266bp/14bp)	by(266bp/150bp/96bp/20bp/14bp)	bz(266bp/102bp/96bp/48bp/20bp/14bp)

cd(280bp/198bp/68bp/14bp)	cz(198bp/102bp/96bp/68bp/48bp/20bp/14bp)	dy(280bp/150bp/96bp/20bp/14bp)	dz(280bp/102bp/96bp/48bp/20bp/14bp)
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