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## PCR-RFLP

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PCR-RFLP

L DNA

PCR

*NcoI* *MspI*  
N M

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PCR-RFLP

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## Polymorphism of Calpastatin Gene in Moghani Sheep Breed Using PCR-RFLP A Torabi<sup>1</sup>, J Shodja<sup>2</sup>, N Pirani<sup>2\*</sup>, G Elyasi<sup>3</sup> and M Valizadeh<sup>4</sup>

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### Abstract

Tenderness is one of the important characteristics of meat and desired to consumers. Calpastatin is one of the genes which affects meat quality and growth of the animals. The aim of this study was to determine genotypic variation of calpastatin gene in Iranian Moghani sheep breed using PCR-RFLP. For conducting this study, the blood samples of 176 sheep were collected. After extraction of genomic DNA, the L region of exon 1 of calpastatin gene with 622 bp was amplified with specific primers. The *MspI* and *NcoI* restriction enzymes were used to cut the PCR products. The mentioned enzymes cut the amplicons in complementary manner and alleles of M and N with frequency of 0.54 and 0.46, respectively were produced. Genetic variation (heterozygosity) in the Moghani sheep breed was moderate (0.49) and the population was in Hardy-Weinberg equilibrium. The results confirmed that the PCR-RFLP can be used to identify different genotypic variation in this breed.

**Keywords:** Calpastatin, Moghani sheep breed, PCR-RFLP, Polymorphism



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PCR-RFLP

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PCR-RFLP

N M

EDTA

DNA ( )  
DNA (C B A)  
)  
DNA ( AC  
AA  
PCR /  
L  
)  
L ( ) (

Ovine 1C: 5' TG GGG CCC  
AATGACGCCATCGATG 3' (exon 1C)  
Ovine 1D: 5' GG TGGAGCAGC  
ACTTCTGATCACC 3' (exon 1D)

PCR

Taq

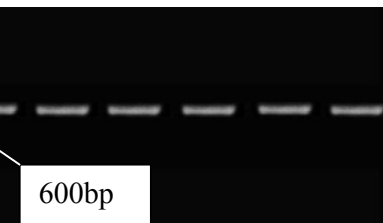
/ dNTP

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<sup>1</sup>Salting out

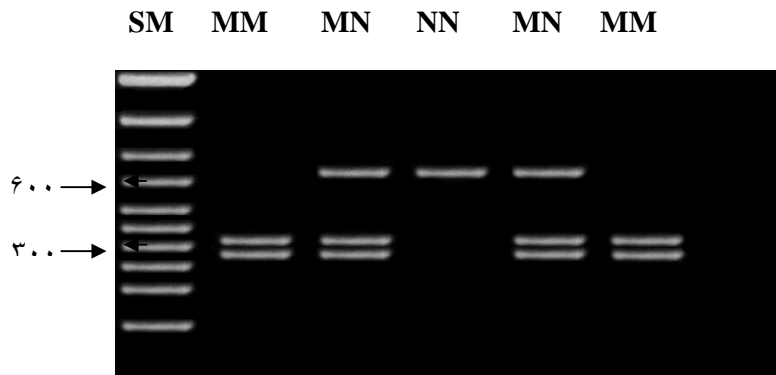
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 PCR .  
 .( ) UNO II Biometera  
 PCR .  
*MspI* CAST ( )  
 MN MM *NcoI*  
 NN  
 (MM) *MspI* PCR  
 /  
 PCR (NN)  $\mu\text{g}/\mu\text{l}$   
 (MN)  
 / PCR  
*NcoI* *NcoI* *MspI*  
 ( )  
*NcoI* %  
 (MM) ( )  
 PCR ( )  
 (NN)  
 ( ) (MN) -  
 N M PopGen 32  
 .( )  
 MN MM NN DNA  
 DNA  
 CAST

<sup>2</sup> Standard size marker

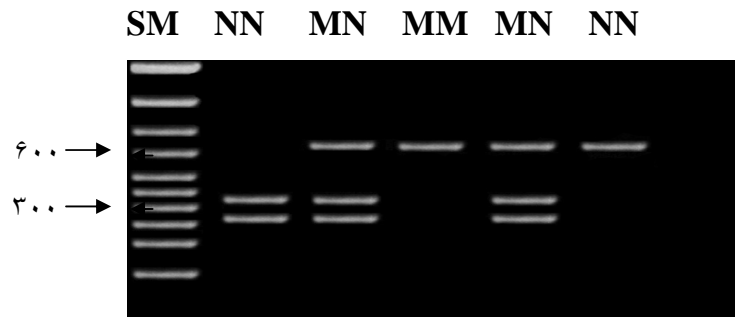


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( )						
	N	M	NN	MN	MM	CAST
/	/	/	/	/	/	



( : SM) *MspI*



( : SM) *NcoI*

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( / )

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( )

( )  
/ N / M  
NN

( )  
N M  
( / / )

M  
N M ( )  
/ /  
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PCR-RFLP

NN

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