

GENETIC POLYMORPHISM OF ITI IN PROTEIN AND NUCLEIC ACID LEVEL

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The genetic polymorphism of inter- α -trypsin inhibitor, (ITI) in Han population of Beijing was studied on protein and nucleic acid level. Isoelectric focusing on polyacrylamid gels followed by immunoblotting and PCR-RFLP technique were used to determine the phenotype and genotype of individuals in Han population in Beijing. The results showed that the ITI was polymorphic in the Han population in Beijing. There were two common alleles(ITI*1 and ITI*2) and on rare allele(ITI*3) in protein level. The allele frequencies were as follows; ITI*1=0.5578, ITI*2=0.4225, ITI*3= 0.0197. And there were 3 alleles in nucleic acid in ITI heavy chain H1(ITIH1), ITIH1*1, ITIH1*2 and ITIH1*3. The allele frequencies were as follows; ITIH1*1=0.5641, ITIH1*2=0.4103, ITIH1*3= 0.0256. The observed numbers of phenotype and genotype were in agreement with the expected numbers under the Hard-Weinberg equilibrium. It was obvious that the ITI is a new genetic marker which can be used in the forensic science.