

F113 Isolation of the Cryptic CRE Binding Protein Gene Using Match Maker One-hybrid System

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While studying the regulated expression of the human glycoprotein α -subunit gene, cryptic CRE (cAMP response element) region has been identified in the mutant α -subunit, in which canonical double CREs were destroyed. This cryptic CRE region showed a typical enhancer property and was found to bind nuclear protein factor(s). Match Maker One-hybrid system (DNA-protein interaction assay) have been employed to clone genes encoding the cryptic CRE binding protein(s). Among several clones which showed strong interaction with cryptic CRE region, a candidate gene for the cryptic CRE region binding protein was chosen based on the β -Gal activity and partially sequenced so far. This gene seems to be similar to Grb2 and Fyn binding protein gene which contains three proline-rich domain. We are in the process of analyzing the significance of the gene in the regulated expression of the α -subunit gene.

F114 CA Repeat Polymorphism of Cellular Stress Response Gene in Korean Population

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The Cellular Stress Response(CSR) gene is a potent regulator of intracellular reactive oxygen intermediates and has the dinucleotide (CA) repeat polymorphism. Allele frequencies were estimated from the genomic DNA of 197 unrelated Korean individuals by polymerase chain reaction and 12% polyacrylamide gel electrophoresis. The major alleles(a1, a2, a3 and a4) frequencies were 0.135, 0.312, 0.315, and 0.157, respectively. The observed heterozygosity was 0.690. The allele frequency appeared to be in agreement with the Hardy-Weinberg expectation. We confirm the genetic polymorphism of the CSR gene in Korean population.