

# Association of rs1883832 SNP in Kozak Region of CD40 Gene with Diabetes Mellitus Type 2: A Case Control Study

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## Abstract

**Purpose:** Lifestyle and genetic factors are considered effective risk factors for Diabetes. Genetic factors are not as discussed as a lifestyle in the path of causing diabetes. CD40 is an inflammatory agent of TNF superfamily, which is believed to affect pancreatic beta cells during the interaction to its ligand, CD154. Polymorphism of rs1883832 of Kozak sequence of CD40 gene is suspicious to create different phenotypes, including uncontrolled Diabetes mellitus (DM). The present study was done to compare the association between rs1883832 SNP in CD40 Kozak sequence with Diabetes mellitus type 2 (DMT2) in diabetic patients and healthy people.

**Method:** This case-control study was done on 180 patients of DMT2 and 180 healthy subjects. The rs1883832 SNP of Kozak sequence of CD40 gene was studied using PCR-RFLP and DNA sequencing technique. Collected data analyzed by SPSS v.11.5.

**Significant findings:** The frequency of TT genotype and T allele were significantly higher in the patient's group, while CC genotype was higher in the control group.

**Conclusions:** According to the results of this study, it seems the existence of the genotype carrying the mutated allele (CT+TT) in -1C>T of KOZAK region in the CD40 gene is associated with an increased risk of DMT2.

**Key words :** Insulin resistance    Kozak sequence    CD40    Polymorphism