



CAMK4 gene variation is associated with hypertension in a Uygur population

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Genet. Mol. Res. 15 (1): gmr.15017207

Received July 14, 2015

Accepted October 1, 2015

Published January 22, 2016

DOI <http://dx.doi.org/10.4238/gmr.15017207>

ABSTRACT. Considering that calcium/calmodulin-dependent kinase 4 (CAMK4) plays a pivotal role in blood pressure regulation, we investigated the association between a *CAMK4* polymorphism (rs10491334) and hypertension in the Han, Kazak, and Uygur ethnic groups. We studied 1224 patients with hypertension and 967 normotensive controls classified into three ethnic groups (Han, Kazak, and Uygur). The rs10491334 polymorphism was genotyped using a TaqMan[®] 5'-nuclease assay. In the Uygur group, the T-allele frequency in patients with hypertension was twice that of the controls (12.5 vs 6.38%), and T-allele carriers had a significantly increased risk of hypertension compared with non-carriers (odds ratio = 2.200; 95% confidence interval = 1.473-3.285, $P < 0.001$). However, no significant correlation was found in the Han and Kazak

groups. The T-allele of rs10491334 in *CAMK4* was associated with hypertension in the Uygur group.

Key words: Calcium/calmodulin-dependent kinase 4; *CAMK4*; rs10491334; Hypertension