



## Relationship between *EPHX2* gene polymorphisms and essential hypertension in Uygur, Kazakh, and Han

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**ABSTRACT.** We investigated the association between rs751141 polymorphisms in the *EPHX2* gene and essential hypertension in Uygur, Kazakh, and Han subjects in Xinjiang, China. A total of 302 essential hypertensive patients in Uygur, 267 in Kazakh, and 368 in Han, as well as 323 normotensive controls in Uygur, 284 in Kazakh, and 348 in Han were enrolled in this study. The TaqMan assay was used to detect the rs751141 G/A gene polymorphism in *EPHX2*. The rs751141 G/A genotype frequencies for the GA+AA genotypes were 40.2% in essential hypertensive subjects and 52.0% in control subjects in the Han population. The frequencies were significantly different between the 2 Han groups ( $P < 0.01$ ). The rs751141G/A gene polymorphism showed no significant difference between essential hypertensive patients and normotensive controls in Kazakh and Uygur (all  $P > 0.05$ ). Essential hypertension in Xinjiang was associated with the rs751141 G/A allele gene polymorphism in *EPHX2* in Han subjects but not in Kazakh and Uygur subjects. The rs751141 allele gene polymorphism may be an independent protective factor against essential hypertension in the Han population.

**Key words:** Epoxy compounds; Essential hypertension; Single nucleotide polymorphisms