

Accepted Manuscript

Genetic differentiation and forensic efficiency evaluation for Chinese Salar ethnic minority based on a 5-dye multiplex insertion and deletion panel

Ruilin Ma, Chunmei Shen, Yuanyuan Wei, Xiaoye Jin, Yuxin Guo, Yuling Mu, Siqi Sun, Chong Chen, Wei Cui, Zhaoming Wei, Zhenmin Lian



PII: S0378-1119(18)30302-0
DOI: doi:[10.1016/j.gene.2018.03.058](https://doi.org/10.1016/j.gene.2018.03.058)
Reference: GENE 42680
To appear in: *Gene*
Received date: 2 August 2017
Revised date: 18 March 2018
Accepted date: 19 March 2018

Please cite this article as: Ruilin Ma, Chunmei Shen, Yuanyuan Wei, Xiaoye Jin, Yuxin Guo, Yuling Mu, Siqi Sun, Chong Chen, Wei Cui, Zhaoming Wei, Zhenmin Lian , Genetic differentiation and forensic efficiency evaluation for Chinese Salar ethnic minority based on a 5-dye multiplex insertion and deletion panel. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. *Gene*(2017), doi:[10.1016/j.gene.2018.03.058](https://doi.org/10.1016/j.gene.2018.03.058)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Genetic differentiation and forensic efficiency evaluation for Chinese Salar ethnic minority based on a 5-dye multiplex insertion and deletion panel

Ruilin Ma^{1,2,3,#}, Chunmei Shen^{1,#}, Yuanyuan Wei^{2,3}, Xiaoye Jin^{2,3,4}, Yuxin Guo^{2,3,4}, Yuling Mu^{2,3,4}, Siqi Sun¹, Chong Chen^{2,3,4}, Wei Cui^{2,3,4}, Zhaoming Wei¹, Zhenmin Lian¹

¹ College of Life Sciences, Shaanxi Normal University, Xi'an, Shaanxi 710062, P.R. China

² Key Laboratory of Shaanxi Province for Craniofacial Precision Medicine Research, College of Stomatology, Xi'an Jiaotong University, Xi'an, Shaanxi 710004, P.R. China

³ Clinical Research Center of Shaanxi Province for Dental and Maxillofacial Diseases, College of Stomatology, Xi'an Jiaotong University, Xi'an, Shaanxi 710004, P.R. China

⁴ College of Medicine and Forensics, Xi'an Jiaotong University Health Science Center, Xi'an, Shaanxi 710061, P.R. China

[#]These authors contributed to this work equally.

Abstract

The present study investigated the genetic diversities of 30 autosomal InDel loci of Investigator DIPplex kit (Qiagen) in Chinese Salar ethnic minority and explored the genetic relationships between the studied Salar group and other populations. The allelic frequencies of deletion alleles at the 30 InDel loci were in the range of 0.1739 (HLD64) to 0.8478 (HLD39). The discrimination power, polymorphism information content and probability of exclusion ranged from 0.4101 (HLD39) to 0.6447 (HLD136), 0.2247 (HLD39) to 0.3750 (HLD92) and 0.0400 (HLD39) to 0.2806 (HLD92), respectively. The observed and expected heterozygosity were in the range of 0.2348 (HLD39) to 0.5913 (HLD92), and 0.2580 (HLD39) to 0.5000 (HLD92), respectively. The cumulative discrimination power and probability of exclusion of the 30 loci reached 0.999999999993418 and 0.99039, respectively. The results of population genetic differentiation comparisons revealed that Salar group had similar allele distributions with Qinghai Tibetan, Xibe and Yi groups. Population Bayesian cluster analysis showed that there were similar ancestry components between Salar group and most Chinese populations. Besides, the principal components analysis and

Download English Version:

<https://daneshyari.com/en/article/8645152>

Download Persian Version:

<https://daneshyari.com/article/8645152>

[Daneshyari.com](https://daneshyari.com)