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研究报告

四川彝族和新疆维族HLA-B位点基因多态性分析

许铭炎[1,2]，洪坤学[1]，马 军[3]，邓小玲[2]，李 军[2]，彭 虹[1]，阮玉华[1]，秦光明[4]，张远志[3]，邢 辉[1]，徐小虎[2]，邵一鸣[1]

1. 中国疾病预防控制中心性病艾滋病预防控制中心， 北京 100050； 2.汕头大学医学院病原生物学教研室， 汕头 515041； 3. 新疆维吾尔族自治区疾病预防控制中心，乌鲁木齐 830011；4. 四川省疾病预防控制中心， 成都 610031

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摘要 应用PCR-SSP(Polymerase Chain Reaction-Sequence Specific Primer) 方法对无亲缘关系的106位四川彝族样品和110位新疆维族样品进行HLA-B基因分型。在彝族样品中共检出20个等位基因，其中高频率的等位基因为B*40（0.2028）、B*15（0.1604）、B*51(0.1274)，低频率的等位基因为B*47 (0.0189)、B*27(0.0142)、B*44(0.0142)、B*18(0.0094)和B*78(0.0047)。在维族样品中共检出27个等位基因，其中高频率的等位基因为B*35(0.1136)和B*51（0.1136），低频率的等位基因为B*41（0.0045）、B*56（0.0045）和B*78（0.0091）。经χ^2检验，两个民族群体的基因型分布均符合Hardy-Weinberg平衡。经遗传分析，四川彝族群体HLA-B基因座杂合度(H)、个体识别率(DP)和非父排除率(EP)分别为0.8977、0.9661和0.8009；维族群体的H、DP和EP分别为0.9372、0.9857和0.8732。本研究获得了四川彝族和新疆维族HL A-B基因座基因频率数据，为临床器官移植配型、人类学、法医学及疾病关联性研究提供了重要的群体遗传学资料。

关键词 四川彝族,新疆维族,HLA-B基因多态性,PCR-SSP

分类号 Q347,R392

Analysis of HLA-B Locus Gene Polymorphism in Sichuan Yi Ethnic Group and Xinjiang Uygur Ethnic Group

XU Ming-Yan [1,2], HONG Kun-Xue [1], Ma Jun3, DENG Xiao-Ling [2], LI Jun [2], PENG Hong [1],RUAN Yu-Hua [1], QIN Guan-Ming [4], ZHANG Yuan-Zhi [3] , XING Hui [1], XU Xiao-Hu [2], SHAO Yi-Ming [1]

1. Division of Research on Virology and Immunology, National Center for STD/AIDS Control and Prevention, Beijing, 100050, China; 2. Department of Pathogenic Biology, Shantou University Medical College, Shantou, 515041,China; 3.Xinjiang Center for Disease Control and Prevention, Urumqi, 830011; 4.Sichuan Center for Disease Control and Prevention, Chengdu, 610031, China

Abstract

The polymorphism of HL A-B alleles in Sichuan Yi and Xinjiang Uygur population were investigated using the PCR-SSP method. Twenty alleles were detected in HLA-B loci in 106 Sichuan unrelated Yi healthy subjects. Of them, B*40, B*15 and B*51 were the most common alleles with an allele frequency of 0.2208, 0.1604, 0.1274 respectively; B*47, B*27, B*44, B*18 and B*78 were the rare alleles with an allele frequency of 0.0189, 0.0142, 0.0142, 0.0094 and 0.0047 respectively. In 110 Xinjiang unrelated healthy Uygur subjects, 27 alleles were detected in HLA-B loci. Of them, B*35 and B*51 were the most common alleles with an allele frequency of 0.1136 and 0.1136 respectively; B*41, B*56 and B*78 were the rare alleles with a frequency of 0.0045, 0.0045 and 0.0091 respectively. The result of χ^2 tests showed that the distributions of HLA-B alleles in Yi and Uygur ethnic groups were in Hardy-Weinberg equilibrium. Heterozygosity (H), discrimination power (DP) and probability of paternity exclusion (EP) of HLA-B locus from Sichuan Yi ethnic group were computed to be 0.8977, 0.9661 and 0.8009; and those from Xinjiang Uygur ethnic group as 0.9372, 0.9857 and 0.8732. This study obtained data on the distributions of HL A-B alleles in the Sichuan Yi and Xinjiang Uygur population and the data can be used in forensic and paternity tests to estimate the frequency of a DNA profile in these two populations, transplant matching, anthropology and disease association study.

Key words Sichuan Yi ethnic Xinjiang Uygur HLA-B Gene Polymorphism PCR-SSP

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通讯作者 邵一鸣 yshao@bbn.cn