



Association of killer cell immunoglobulin-like receptors with pulmonary tuberculosis in Chinese Han

C. Lu¹, Y.-J. Shen¹, Y.-F. Deng², C.-Y. Wang¹, G. Fan¹, Y.-Q. Liu¹, S.-M. Zhao¹, B.-C. Zhang¹, Y.-R. Zhao³, Z.-E. Wang¹, C.-Z. Zhang¹ and Z.-M. Lu¹

¹Department of Laboratory Medicine,
Shandong Provincial Hospital Affiliated to Shandong University,
Shandong University, Jinan, China

²Department of Infection Control, Shandong Provincial Chest Hospital,
Jinan, China

³Department of Center Laboratory,
Shandong Provincial Hospital Affiliated to Shandong University,
Shandong University, Jinan, China

Corresponding author: Z.-M. Lu
E-mail: luzhiming@sdu.edu.cn

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ABSTRACT. Killer cell immunoglobulin-like receptors (KIRs) are involved in the pathogenesis of a variety of diseases. However, whether KIR polymorphism is associated with susceptibility to pulmonary tuberculosis was unknown. We examined a possible association of KIR polymorphism with susceptibility to pulmonary tuberculosis in Chinese Han. We analyzed 15 KIR genes in 109 pulmonary tuberculosis patients and 110 healthy controls using sequence-specific primer PCR analysis of genomic DNA. We found that the frequencies of KIR2DS1, 2DS3 and 3DS1 were significantly higher in patients than in the control group. In addition, the number of subjects carrying more than two activating KIR genes in the patient group was significantly higher than in the control group. The gene cluster containing KIR3DS1-

2DL5-2DS1-2DS5 was also significantly more frequent in the patient group. In conclusion, KIR genes 2DS1, 2DS3 and 3DS1 appear to be associated with resistance to pulmonary tuberculosis in the Chinese Han population. KIR genes apparently have a role in resistance to pulmonary tuberculosis.

Key words: Pulmonary tuberculosis; Polymorphism; Susceptibility; Killer cell immunoglobulin-like receptor