

## 癌-睾丸抗原MAGE-A1、A3、A4在视网膜母细胞瘤中的表达

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### Expression of Cancer-Testis Antigen Genes in Retinoblastoma

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#### 摘要 目的

了解视网膜母细胞瘤(RB)组织癌-睾丸抗原(CTA)基因MAGE-A1、A3、A4的表达,探讨这些基因成为RB特异性免疫治疗靶抗原的可能性。

#### 方法

人RB组织15例,对照组为12例非肿瘤病变视网膜组织及22例正常眼部组织。采用逆转录-聚合酶链反应(RT-PCR)技术检测上述组织MAGE-A1、A3、A4的mRNA表达情况,并根据肿瘤病理分级、肿瘤大小、临床分期等临床指标进行统计学分析。

#### 结果

15例RB组织中,MAGE-A1、A3、A4的表达率分别为33.33% (5/15)、46.67% (7/15)和33.33% (5/15),有73.33% (11/15)的RB组织至少表达一种MAGE基因,33.33% (5/15)的RB组织至少表达两种MAGE基因。12例非肿瘤病变视网膜组织及22例正常眼部组织三种MAGE基因均不表达。

#### 结论

MAGE-A1、A3、A4基因在RB组织中有一定频率的表达,MAGE-A1、A3、A4的表达率与病人的性别、年龄和临床分期,肿瘤大小及病理分级均无相关性( $P>0.05$ )。MAGE-A1、A3、A4有希望成为RB特异性免疫治疗的靶抗原。

关键词: 视网膜母细胞瘤 癌-睾丸抗原 肿瘤免疫治疗

Abstract: Objective

To detect the mRNA expression of three CTAs (MAGE-A1、A3、A4) in retinoblastoma (RB) tissues and investigate the possibility of applying these antigens as the target antigens for RB specific immunotherapy.

Methods

With reverse-transcription polymerase chain reaction (RT-PCR), the mRNA expression of MAGE-A1、A3、A4 in 15 cases of RB tissues, 12 cases of nontumorous retina tissues and 22 cases of normal ocular region tissues were detected. The results of expression and related clinical parameters were analyzed with statistic analysis software.

Results

Among 15 cases of RB tissues, MAGE-A1、A3、A4 mRNA were detected in 33.33% (5/15), 46.67% (7/15), 33.33% (5/15), respectively. At least one of these three MAGEs were detected in 11 cases of RB tissues (73.33%), and at least two of these three MAGEs were detected in 5 cases of RB tissues (33.33%). None of these three MAGEs can be detected in the 12 cases of nontumorous retina tissues and 22 cases of normal ocular region

tissues.

## Conclusion

With expressive frequency in RB, no relationship was found between the expression of these three MAGE genes and related clinical parameters ( $P>0.05$ ). MAGE-A1、A3、A4 might be potential target antigens for specific immunotherapy of RB.

Key words: Retinoblastoma Cancer-testis antigen Cancer immunotherapy

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