

雌性畸胎瘤细胞离体分化时X染色体的行为¹⁾

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摘要 用雌性畸胎瘤LT细胞(具有两个X染色体)为材料, 在离体条件下诱导分化。通过对X连锁的HPRT和G6PD等酶的定量分析, 并与Pcc31 A/ 1畸胎瘤细胞(Xo型)对比。结果表明, HPRT与G6PD酶比活性在分化后的LT细胞中, 以及在已分化的胚胎体重新种植并传代后的细胞中, 均与Pcc3ZA f 1 (Xo型)细胞相似, 比未分化的细胞降低了一半左右。这些结果可认为, 在雌性畸胎瘤细胞离体分化过程中, 发生了X染色体的生化分化。

关键词 [畸胎瘤细胞; 离体分化; X染色体失活](#)

分类号

The Behavior of X—Chromosome Luring Differentiation of Female Teratocarcinoma Cells in vitro

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Abstract

Mouse teratocarcinomas stem cells (called EC cells), especially female EC cells, show remarkable similarities to the cells of the early- embryo. They are able to differentiate into the same variety of tissue types as early embryonic cells. And they can undergo in vitro the changes typical of X chromosome differentiation. Because they can serve as a model system for the study of X chromosome differentiation in varo. We made use of two lines of EC cells. One is female LT EC cells containing two X chromosome. Other is Pcc3/A/1 EC cells. It's karyotype is XO. The specific activities of X-linked enzymes HPRT and G6PD were measured in cells before and after differentiated LT and Pcc3/A,'1. The result showed that the specific activity of X-linked HPRT and G6PD in differentiated LT cells were half that in undifferentiated LT cells. And they similar to level of Pcc3/A/1cells with one X chromosome. This suggests that the biochemical differentiation of X chrontosomehas occurred during differentiation of the female EC cells in vitro.

Key words [Teratocarcinoma cell; Differentiation: 二vitro X chromosome Wactivanon](#)

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