

عنوان مقاله:

Study of conservation of BRCA1 protein, a negative regulator of mammary epithelial cell growth in five mammalian species

محل انتشار:

یازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

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خلاصه مقاله:

Introduction: Breast cancer is one of the most common malignancies in women. Genetic factors have an important role in the pathogenesis of this disease. BRCA1 gene plays critical roles in DNA repair, cell cycle checkpoint control, and maintenance of genomic stability. BRCA1 normally serve as a negative regulator of mammary epithelial cell growth and this function is compromised in breast cancer either by direct mutation or by alterations in gene expression. Mutations in BRCA1 are thought to be responsible for 45% of inherited breast cancer. The aim of this work was to study of conservity of BRCA1 protein between five mammals. Methods: Because of the importance of BRCA1 in maintenance of genomic stability, its whole amino acid sequence, was compared in five mammals (homosapien, Pan troglodytes, Macaca mulatta, Nomascus leucogenys, Macaca fascicularis). After preparing this list through bioinformatic NCBI databank and set its format to check in the Clustal Omega software, the amino acid sequences were compared bioinformatically. Results: The results showed high conservity of this protein sequence (over 93%) in the Mammals listed. Probably due to the importance of the role of this gene in genomic stability, its product has maintained its conservity. Conclusion: Since all of the cancer cells have cancer genes, by examining the genes that mutate with a high incidence in certain types of cancers, specific diagnosis of cancer becomes possible. .Due to importance of BRCA1 gene, study of SNPs was recommended in breast cancer patients

کلمات کلیدی:

BRCA1 gene, mammals, breast cancer

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