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PCR Based DNA Analysis in Detecting P53 Mutation in Human Breast Cancer (MDA-468)

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Abstract : Tumor Protein-53 (P53) is one of the tumor suppressor proteins. P53 regulates the cell cycle that conserves stability by preventing genome mutation. It is named so as it runs as 53-kilodalton (kDa) protein on Polyacrylamide gel electrophoresis although the actual mass is 43.7 kDa. Experimental evidence has indicated that P53 cancer mutants loses tumor suppression activity and subsequently gain oncogenic activities to promote tumourigenesis. Tumor-specific DNA has recently been detected in the plasma of breast cancer patients. Detection of tumor-specific genetic materials in cancer patients may provide a unique and valuable tumor marker for diagnosis and prognosis. Commercially available MDA-468 breast cancer cell line was used for the proposed study.

Keywords: tumor protein (P53), cancer mutants, MDA-468, tumor suppressor gene

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