
p53 Antibodies

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The p53 tumor suppressor gene has attracted tremendous interest over the last 10 years since this gene was found mutated in diverse tumors and at relatively high frequency. It is postulated that mutation of this gene leads to p53 protein inactivation which, in turn, upsets the normal cell cycle, leading to aberrant proliferation. It has long been recognized that a small proportion of patients with cancer develop p53 antibodies which circulate in serum. It was only until recently that reliable and easy methods for determining these antibodies became available. With use of these methods, researchers have now examined a number of different aspects of p53 autoantibodies in order to answer critical questions. In my presentation, I would describe the following: 1) methodologies for measuring p53 autoantibodies in serum; 2) the frequency of appearance of p53 autoantibodies in

patients with various malignancies; 3) use of p53 autoantibodies for patient diagnosis, monitoring, prognosis, and selection of therapy; and 4) the mechanism by which some patients develop autoantibodies and many others do not.

The generation of p53 autoantibodies by some patients is an interesting biological phenomenon with possible practical applications. It appears that the presence of such autoantibodies in serum is an unfavorable prognostic indicator. Antibodies may also have some value for patient diagnosis and monitoring. The understanding of the mechanism of p53 autoantibody generation in serum may ultimately lead to the design of diagnostic procedures for cancer or to the identification of novel targets for development of therapeutic cancer vaccines.