

[*Igakunoayumi*, **139**, 529 (1986)]

**Anti-Striational Muscle Antibodies in Myasthenia Gravis—  
Especially in Myasthenia Gravis with Thymoma—**

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In order to investigate the antibodies directed against skeletal muscle, we developed a solid-phase radioimmunoassay using a PBS extract of human skeletal muscle as an antigen source. Forty-one out of 44 myasthenia gravis (MG) patients with thymoma had antibodies to muscle PBS extract, while 14 out of 48 MG patients without thymoma did. There was a significant difference in positive percentages of the antibodies between MG patients with and without thymoma. There was no correlation between titers of anti-skeletal muscle antibodies and anti-acetylcholine receptor antibodies. This serologic test may be useful for the evidence of presence of thymoma in patients with MG, in addition to the measurement of anti-AChR antibody.

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**A Highly Sensitive Assay Method for Human Placental Alkaline  
Phosphatase Involving a Monoclonal Antibody Bound to a Paper Disk.**

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A monoclonal antibody which is specific for human placental alkaline phosphatase (PALP) and does not cross-react at all with intestinal alkaline phosphatase was prepared, and a procedure for the determination of PALP activity in serum was developed involving this monoclonal antibody bound to a paper disk. The minimum amount of PALP detectable by this method is 0.0025 King-Armstrong unit. Good correlation with the heat-treatment method was obtained. Therefore this proposed method can be used as a routine clinical test for the determination of serum PALP.

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**Determination of Mitochondrial Aspartate Aminotransferase in Serum.**

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Two specific and sensitive immunoassay methods for the determination of mitochondrial aspartate aminotransferase (m-AST) are described. One is a sandwich enzyme immunoassay which measures immunologically active m-AST. The other is a paper disk method which measures catalytically active enzyme bound to anti m-AST antibody-conjugate paper disk. These assay methods were used to monitor the level of m-AST in serum. From measurements obtained by both methods, the correlation between the concentration of m-AST protein and its activity was poor confirming that an inactive form of m-AST exists in serum, and that the specific activity of serum m-AST differs in individual diseases.