

Myelin-Reactive Monoclonal Antibodies from Multiple Sclerosis Patients Cross-React with Nucleoproteins in HEp-2 Lysate

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Abstract

© 2016, Springer Science+Business Media New York. Autoimmune disorders are characterized by appearance of self-reactive species of immune system such as T cells, B cells and antibodies. For the majority of autoimmune pathologies the list of specific autoantigens is known. Myelin basic protein (MBP) is one of the most important autoantigens in multiple sclerosis (MS), which destruction is a hallmark of disease progression. Antibodies toward MBP are found in serum and cerebrospinal fluid of MS patients. Here we investigated whether monoclonal human MBP-specific antibodies selected from MS patients repertoire cross-react with other autoimmune markers. For this purpose we performed Western blot analysis of recombinant anti-MBP antibodies with HEp-2 cell lysate. Our data suggest existence of enhanced level of cross-reactivity of anti-MBP antibodies with ribonucleoprotein A (RNP A), a marker of Sharp's syndrome and systemic lupus erythematosus, ribosomal P protein (Rib. P-Prot), a marker for systemic lupus erythematosus, and centromere protein A/B (CENP A/B), markers for progressive systemic sclerosis.

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Keywords

Autoimmunity, Cross-reactivity, IgG, MS, Myelin basic protein, Polyreactivity