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Authors

JEFFES, EWB
ININNS, EK
SCHMITZ, KL
[et al.](#)

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ANTIBODIES TO LYMPHOTOXIN AND TUMOR NECROSIS FACTOR ARE PRESENT IN NORMAL SERUM. E.W.B. Jeffes, E.K. Inniss, K.L. Schmitz, C.A. Dett, R.S. Yamamoto, and G.A. Granger, Departments of Dermatology, V.A. Hospital, Long Beach, CA and Univ. of California, Irvine, and Dept. of Molecular Biology and Biochemistry, Univ. of California, Irvine, CA.

Lymphotoxin (LT) and Tumor Necrosis Factor (TNF) are structurally related cytokines which may play a role in a number of autoimmune diseases, like Kawasaki's Syndrome. We describe naturally occurring antibodies in rabbit and human serum that bind to recombinant LT and TNF. These antibodies bind in an antigen specific manner. F(ab)'₂ obtained from normal rabbit serum binds to LT and TNF, where Fc does not. IgG and IgM from nonimmune sera contain antibodies which bind to LT and TNF. While antibodies from animals immunized with recombinant LT and TNF neutralized LT and TNF activity in vitro in a specific manner; normal IgG, which does bind to LT and TNF, does not neutralize LT or TNF cytotoxic activity in vitro. The presence of these antibodies to LT and TNF may explain why normal immunoglobulin (IgG) therapy is effective in several autoimmune diseases, like Kawasaki's Syndrome and Idiopathic Thrombocytopenic Purpura (ITP). Furthermore, the presence of these antibodies does provide an alternative to the idiotype anti-idiotype hypothesis often employed to explain the immunomodulatory effects of normal immunoglobulins.