

Immunodeficient NOD-scid IL-2R[?]null Mice Do Not Display T and B Cell Leakiness

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Abstract :

NOD/Shi-scid IL-2R[?]null (NOG) mice established by introducing the IL-2R[?]null gene of IL-2R[?] KO mice into NOD/Shi-scid mice by backcross-mating show a high xenograft engraftment level and are therefore well suited as a humanized mouse model.

SCID mice bearing the *Prkdc*^{scid} gene show a high incidence of thymic lymphoma and a leaky phenomenon in which a few clonal T and B cells develop in aged mice. In the present study, NOG mice were assessed for the presence of a leaky phenomenon such as the one observed in C.B-17-scid and NOD-scid mice. Serum immunoglobulin analysis did not detect IgG or IgM in NOG mice, unlike the findings in C.B-17-scid and NOD-scid mice. Flow cytometry analysis revealed the absence of T and B cells in the peripheral blood and spleens of NOG mice. These results reflect the suppression of the leaky phenomenon in NOG mice through the inactivation of the IL-2R[?] gene, which is commonly expressed in T and B cell growth factor receptors to IL-2, IL-4 and IL-7.

Key Word :

immunoglobulin, leakiness, NOD-scid IL-2R[?]null mice

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