y Development Of The Thymus-depended Cells In Irradiation Chimeras Attributable To

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Abstract:

Allogeneic bone marrow chimeras were prepared using reciprocal combinations of AKR and C3H mice. When C3H mice were recipients, the number of thymocytes recoverable from such chimeras (C3H recipient chimeras) was small as compared with that from chimeras for which AKR mice were used as recipients (AKR recipient chimeras) regardless of donor strain. The thymocytes from C3H recipient chimeras showed a profound deficiency in generating proliferative responses to stimulation by anti-CD3 mAb (2C11) or anti-TCR (alpha, beta) mAb (H57-597), even though the expression of CD3 and TCR molecules fell within the same range as that in AKR recipient chimeras. Furthermore, after stimulation with immobilized 2C11, the proportion of IL-2R+ cells in the thymocytes from C3H recipient chimeras was much less than that in AKR recipient chimeras. However, no significant difference in proliferative responses to 2C11 plus PMA, in influx of Ca2+ after stimulation with 2C11 or IL-2 production in response to 2C11 plus PMA or PMA plus A23187 was demonstrated between C3H and AKR recipient chimeras. These findings suggest that the thymocytes from C3H recipient chimeras have a deficiency in the signal transduction system as compared with chimeras for which AKR mice are the recipients. The thymic stromal component involved in this difference in the C3H recipient chimeras is discussed.