

## Receptor dependency and receptor editing in T and B cells

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We have compared receptor editing and the dependence of mature cells on antigen receptor expression in T and B lymphocytes using mouse models tailored by Cre-assisted gene targeting. These experiments, to be presented at the meeting, lead us to believe that in contrast to B cell development, receptor editing does not play a major role in thymic T cell development (whereas sequential rearrangements in the TCRalpha locus do), and that the in vivo maintenance of most lymphocytes depends on antigen receptor expression, most dramatically in B and least so in CD4<sup>+</sup> T cells.

### References

Lam K-P, Kuehn R, and Rajewsky K. In vivo ablation of surface immunoglobulin on mature B cells by inducible gene targeting results in rapid cell death. *Cell* 90:1073-1083 (1997).

Polic B, Kunkel D, Scheffold A. and Rajewsky K. How  $\alpha\alpha$  cells deal with induced TCR $\alpha$  ablation. *Proc. Natl. Acad. Sci. (USA)* 98, Vol. 15: 8744-8749 (2001).