Signaling leading to the survival or apoptosis of immune system cells must be balanced to ensure the normal mounting and extinguishing of immune responses. One of the essential regulators of immune cell survival is the transcription factor nuclear factor kappaB (NF-kappaB). NF-kappaB is critical for the activation of T and B lymphocytes and is a central coordinator of innate and adaptive immunity. Pathogen recognition, whether mediated via the Toll-like receptors or via the antigen-specific T- and B-cell receptors, initiates the activation of distinct signal transduction pathways that activate NF-kappaB. Activation of NF-kappaB by these pathways is necessary for lymphocyte activation, expansion, and effector function in response to infection. In addition, recent work has shown that the aberrant activation of NF-kappaB by these pathways can contribute to the development of autoimmunity, chronic inflammation, or lymphoid malignancy. There is thus an urgent need to understand the exact molecular details of these signal transduction cascades so that we may develop novel therapeutics. This article will review the specific signal transduction pathways that mediate NF-kappaB activation in response to antigen receptor ligation in T and B lymphocytes. These newly defined pathways, which are essential for adaptive immune responses, are built around the key adapter protein, Bcl-10. Bcl-10 is known to participate in chromosomal translocations in human mucosa-associated lymphoid
tissue lymphomas.

Zeitschriftenstitel / Abkürzung:
Immunol Rev

Jahr:
2003

Band:
193

Seiten:
93-100

Sprache:
eng

Pubmed:

Print-ISSN:
0105-2896

TUM Einrichtung:
III. Medizinische Klinik und Poliklinik

Occurences:
· Einrichtungen > Fakultäten > Fakultät für Medizin > Kliniken und Institute > III. Medizinische Klinik und Poliklinik (Hämatologie / Onkologie) > 2003

entries: