

## Regulation of Inhibitor of Apoptosis Protein expression in B-cells

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The regulation of apoptosis plays a crucial role in lymphocyte development and homeostasis. Although much is known about the expression of pro- and anti-apoptotic members of the Bcl-2 gene family during an immune response, less information is currently available concerning the expression and role of the Inhibitor of Apoptosis (IAP) protein family. Here we demonstrate that different members of the IAP family show distinct patterns of expression in primary and secondary B cells and in BAL17 and WEHI 231 cultures following various modes of stimulation. Whereas mIAPs 1 and 2 are constitutively expressed before and during stimulation, mIAP3 (XIAP) and m-survivin mRNA expression and survivin protein are upregulated upon anti- $\mu$  stimulation, in the presence and absence of anti-CD40 costimulation. m-survivin mRNA expression appears to be maximal at three days, and, by CFSE analysis, at three cell divisions following stimulation. Western blot analysis reveals the presence of extensive post-translational regulation of m-survivin. Modified expression upon in vitro stimulation in multiple cell types suggests a role for survivin in the regulation of the B cell immune response. In hopes of clarifying survivin's role in the immune system, our ongoing work examines the function of post-translational modification and its significance for memory maintenance.