Keywords and Phrases for Generation of Antibody Diversity

B-lymphocytes that bind substances in the bone marrow are recognizing "self epitopes" and are eliminated by apoptosis, a programmed cell suicide.

coded for by a combination of 3 genes, called VH (variable heavy), DH (diversity heavy), and JH (joining heavy)

consists of either a kappa chain or a lambda chain coded for by a combination of 2 genes, VL (variable light) and JL (joining light)

Immature B-lymphocytes with self-reactive B-cell receptors may be stimulated to undergo a new gene rearrangement to make a new receptor that is no longer self-reactive.

Somatic hypermutation creates a great opportunity for selection of variant B-lymphocytes with even better fitting antigen-binding sites that fit the epitope more precisely.

Specialized enzymes in the B-lymphocyte cause splicing inaccuracies wherein additional nucleotides are added or deleted at the various gene junctions.

Various different genes along a chromosome are cut out of one location and joined with other genes along the chromosome.