

POSTER NO 23

The Development of a Monoclonal Anti-k (cellano) Suitable for Blood Typing.

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The Kell blood group system comprises of some 22 antigens, 14 of which are described as high incidence, including k, an antigen that is present on the red cells of 99.8% of the white population. Consequently, patients with allo-anti-k are quite rare but they present a problem in the provision of compatible blood as only 0.2% of the population may be compatible.

Scientists working within the Scottish National Blood Transfusion Service produced a cell line LM357/828, which secretes IgM antibody showing reactivity with a k-like epitope. This anti-k-like antibody was suitable for routine screening for k negative blood donations.

The aim of this work was to develop a specific blood typing reagent from a screening reagent. The antibody was previously known to be influenced by pH change. By adjustment of pH and modification of the reagent formulation we found that the antibody is capable of strongly agglutinating red cells exhibiting the k antigen.

The reagent was evaluated in many testing centres and found to be a suitable blood typing reagent for the detection of the presence of the k antigen.