

عنوان مقاله:

Preparation and Purification of specific Antibody against Pneumococcus for application in diagnostic kits

محل انتشار:

بیستمین کنگره بین المللی میکروب شناسی ایران (سال: 1398)

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خلاصه مقاله:

Introduction and Objectives: Streptococcus Pneumonia is the cause of a wide range of mild infections such as otitis media, sinusitis, and severe infections such as pneumonia, septicemia and meningitis especially in children under 5 years old and old people. Assays of this bacterial infections are based on either antigens or antibodies produced by the host. Detection of the polysaccharide capsule of the bacteria is the most frequently used method for screening of this infection. The purpose of this study was to prepare and purify specific antibody against pneumococci for application in immunofluorescence, agglutination and ELISA-based diagnostic kits. Materials and Methods: A total of 109 inactivated bacteria were applied for three successive infusions in New Zealand White Rabbit in a week. Blood sample collection and serum separation were performed. Then immunoglobulin purification steps were done using ammonium sulfate sedimentation, tangential flow filtration and DEAE Ion exchange chromatography. Purified antibody was also used for pneumococcal diagnosis in clinical specimens based on agglutination. Result: The results of quantitative spectrophotometric and measurement in SDS-Page electrophoresis as well as Lowry -Bradford protein assay showed that the purified isolated protein had a high quality and quantity. The results of agglutination test from purified antibody were consistent with the culture method. Conclusion: Due to low cost and feasibility of the method, agglutination tests has always been very popular in lab for detection of Streptococcus pneumonia. This purified .antibody can be used in clinical diagnosis and serologic identification of isolated bacteria

کلمات کلیدی:

Pneumococcus, Antiserum, Agglutination, Elisa

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