PREPARATION OF A SPECIFIC PEROXIDASE CONJUGATE TO THE CAUSATIVE AGENT OF CAMPYLOBACTERIOSIS

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Immunoglobulins are protein compounds in blood plasma - glycoproteins, the main function of which is to protect the body from infections. Immune antibodies are divided into five classes - IgA, IgG, IgM, IgD, IgE. Great importance in diagnostic studies is attached to immunoglobulins IgG, IgA, IgM. During the study, their qualitative and quantitative content is determined. The first determines the presence of infection in the blood, the second determines the level of antibodies in the blood of the organism affected by the disease. For each infection there is a certain level of antibodies M and G in the blood, and some infections are not accompanied by an increase in the level of immunoglobulin.

IgG antibodies are large molecules with a mass of about 150 kDa. These are specific antibodies produced by cells of the immune system in response to the attack of pathogens - causative agents of viral, bacterial, fungal and other diseases. G-class immunoglobulins (IgG) are dominant among all other serum immunoglobulins. They ensure the formation of long-term and stable, in some cases lifelong immunity against a number of serious pathologies such as measles, rubella, chickenpox.

IgG makes up 80% of all immunoglobulins in the blood serum and up to 20% of its total proteins. Plasmocytes (mature B-lymphocytes) synthesize IgG.

G-immunoglobulin (IgG). Immunoglobulins of this isotype have the classic monomeric form and provide the bulk of the antibodies synthesized during the second immune response. Because of its low molecular weight, IgG readily penetrates tissues and is the most studied immunoglobulin with the ability to penetrate the placental barrier. It passes through the placenta from mother to fetus and protects the baby from infection, many different viruses, providing the baby with humoral immunity until the first (until about 4-6 months of age) of its own immunity. Consequently, a newborn baby will have the same antibodies as its mother for the first five to six months of life, and thus will be able to protect itself from all the dangerous pathogens the baby encounters in the mother's life until these antibodies break down and disappear. This set of immunoglobulins is very important for the newborn, who is very susceptible to infections, especially in the respiratory and digestive systems that can activate the complement system.

The main purpose of this work is to isolate and purify G-immunoglobulins from rabbit serum immunized with Campylobacteriosis pathogen antigen.

As a result of precipitation and purification of rabbit blood serum immunized with Campylobacteriosis antigen-causing agent by saturated ammonium sulfate solution by chromatography method, G-immunoglobulin with a total volume of 30 ml and protein concentration of about 1 mg/ml was isolated. The obtained G-immunoglobulin will be used in the preparation of peroxidase conjugate specific for campylobacteriosis pathogen.