

Immunoglobulins

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More information:

- Immunoglobulins, also called **antibodies**, are glycoprotein molecules that make up an important part of the immune system, which is responsible for fighting off infectious disease and foreign “invasions”.
- Often abbreviated as “Ig,” antibodies **are found in blood and other bodily fluids of humans and other vertebrate animals**.
- They help identify and destroy foreign substances such as microbes (e.g., bacteria, protozoan parasites and viruses).
- They are **produced by B-lymphocytes**, which are a class of leukocytes (white blood cells).
- Immunoglobulins are **classified into five categories**: IgA, IgD, IgE, IgG and IgM.
- **Only IgA, IgG and IgM are found in significant amounts in the human body**, but all are important or potentially important contributors to the human immune response.

IgA – It accounts for about 15 percent of the antibodies in the human system, making it the second most common type of immunoglobulin. Only about 6 percent is found in the blood serum. It is seen in a wide variety of biological secretions, including milk, saliva, tears and mucus. It tends to be nonspecific in terms of the types of foreign presences it targets. **Its presence on mucus membranes makes it an important gate-keeper in physically vulnerable locations**, or the spots at which microbes might easily find ways deeper into the body.

IgG – It is the **dominant antibody in the human body**, accounting for a whopping 85 percent of all immunoglobulins. It is **found chiefly in the blood and lymph**. It has the unique ability to cross **placenta in pregnant women, allowing it to**

protect the unborn fetus and newborn baby. IgM

IgM – It is the colossus of immunoglobulins. IgM has a short half life (about five days) and makes up approximately 13 to 15 percent of serum antibodies. It is also the **first line of defense among its four antibody siblings, being the first immunoglobulin made during a typical immunological response.** IgM agglutinates invading material, compelling individual pieces to stick together for easier clearing from the body.