

Protein A

Material (Ligand) for affinity-chromatography

What is Protein A?

Protein A is a kind of protein derived from microorganisms having a characteristic to bind "Fc region (diagram 1)" of the antibody, which development is progressing in recent years by utilizing the above characteristic. Protein A is used for purification of the antibody preparation with advantage of less side effects and expected to be a highly effective treatment. For example, Infliximab (Remicade): Anti TNF- α antibody for the remedy of rheumatoid arthritis, Tocilizumab (Actemra[®]): Anti IL-6 antibody for the improvement of Castleman's disease and Trastuzumab (Herceptin[®]): antibody against oncogene HER2 are already available for clinical use.

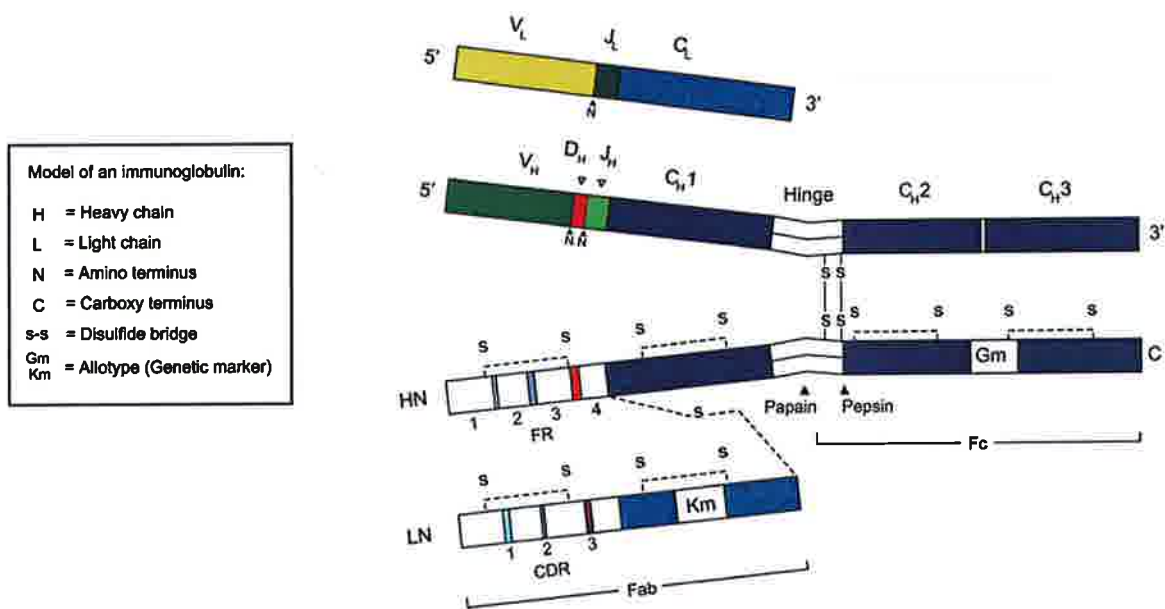


FIG 1. Two-dimensional model of an IgG molecule. The Hand L chains at the top deconstruct the antibody at nucleotide level. The chains at the bottom deconstruct the protein sequence. See the text for further details.

Structure and function of immunoglobulins

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Characteristics:

“Bacillus Expression System” -- Endotoxin free and low cost --

TOA's Protein A is unique for its origin of microorganisms. Usually, Protein A is produced from homogenized *E.coli* where Protein A is expressed in the cell body. So, endotoxin(pyrogen) of *E.coli* can be mixed during the process. However, we use endotoxin-negative bacteria *Bacillus sp.*, which secretes Protein A outside the cell body. By applying this system, we have realized low cost production of Protein A

Purpose of use:

Material (Ligand) for affinity chromatography to be used for antibody purification

Specification:

Contact us

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