

Purification Tools for Monoclonal Antibodies

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The monoclonal antibody has to be subjected to biochemical and biophysical characterization for the desired specificity. It is also important to elucidate the MAb for the immunoglobulin class or sub-class, the epitope for which it is specific and the number of binding sites it possesses. The stability of the cell lines and the MAbs are important. The monoclonal antibodies produced by using mice are quite suitable for in vitro use. However, their administration to humans is associated with immunological complications, since they are foreign to human body. Production of human monoclonal antibodies is preferred. A monoclonal antibody (mAb or moAb) is an antibody made by cloning a unique white blood cell. All subsequent antibodies derived this way trace back to a unique parent cell. Monoclonal antibodies can have monovalent affinity, binding only to the same epitope (the part of an antigen that is recognized by the antibody). In contrast, polyclonal antibodies bind to multiple epitopes and are usually made by several different antibody secreting plasma cell lineages. Bispecific monoclonal antibodies can also Purification of monoclonal antibodies. *Methods Mol Biol.* 1998;80:113-9. doi: 10.1007/978-1-59259-257-9_11. Antibodies, Monoclonal. Caprylates. Carrier Proteins. Examples include the purification of monoclonal IgG-type antibodies, purification of polyclonal IgG and its subclasses, and the adsorption and purification of immune complexes involving IgG. IgG subclasses can be isolated from ascites fluid, cell culture supernatants and serum. Table 13 shows a comparison of the relative binding strengths of protein A and protein G to different immunoglobulins. Strong affinity for monoclonal mouse IgG1 and rat IgG. Complete kit contains HiTrap Protein G HP (1 ml), accessories, pre-made buffers for 10 purifications and detailed experimental protocols. 31.