

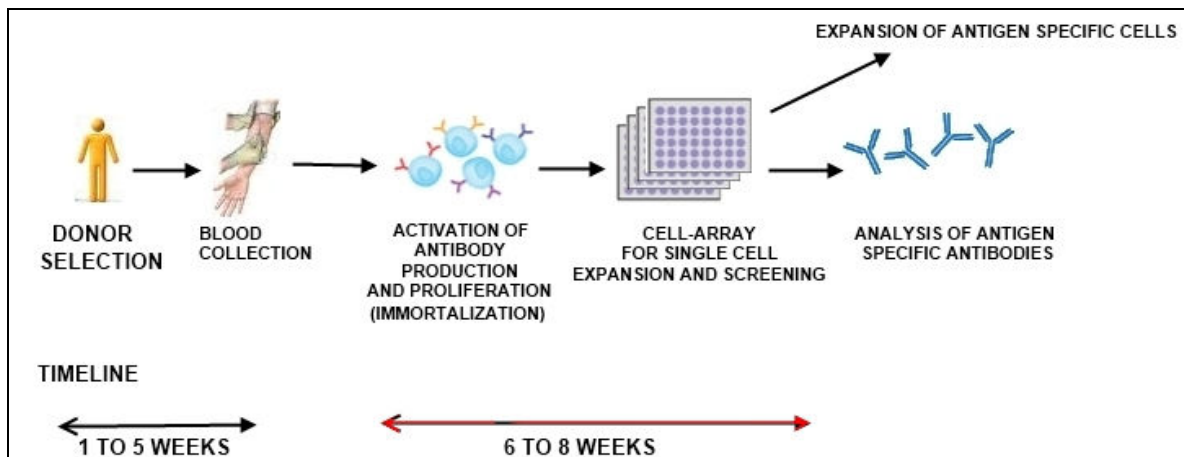
Human monoclonal antibody development

Bioworld Consulting Laboratories human monoclonal antibody technology uses a unique proprietary method to capture and immortalize natural human antibody producing cells for in vitro production of antigen specific human antibodies. The cell lines produce antibodies into the medium, which can be purified or the immunoglobulin gene can be transferred to other cell lines (CHO or others) for large scale production. The proof of concept has been tested and human monoclonal antibody producing cell lines have been developed against a viral antigen and against a tumor associated antigen.

Our natural human antibodies differ from antibodies made with artificial methods using non-human systems and humanization. The best and most effective antibodies are generated by immunocompetent individuals who have been in the past naturally infected with infectious agents or developed natural antibodies against various antigens. Bioworld Consulting Laboratories developed a unique method to identify individuals who developed antibodies against a target antigen (pathogen, tumor antigen, etc.) and to isolate and immortalize the antibody producing cells. After isolation of antigen specific immortalized B-cells the antibodies can be purified from the tissue culture medium or the specific immunoglobulin gene can be transferred to other cell lines (CHO or others) for large scale production.

Bioworld Consulting Laboratories method for cloning natural human monoclonal antibody producing cells has several advantages.

- First, it does not require isolation and purification of B-cells therefore no loss of antigen specific B-cells occurs, which is associated with other methods.
- Second, it produces natural human antibodies, which has been naturally produced by the immune system. It can be easily characterized and epitope mapped without recombinant technology for specific therapies.
- Third, once the donor blood has been obtained, it will only take 6-8 weeks to obtain the monoclonal antibody producing clones.
- Finally, because the cells are isolated from human blood, we can develop a broad variety of human antibodies for treatment of various diseases especially for patients with cancer or infectious diseases where no effective treatments are available.



Key advantages of Bioworld Consulting Laboratories human monoclonal technology:

- Not affected by patents associated with other technologies
- Rapid progress from target identification to clinical development using epitope specific antibodies
- Clones can be selected targeting different epitopes on the same antigen
- Native human antibodies, therefore unlikely to be immunogenic or induce adverse effects in patients, which generally a problem with humanized antibodies.

For further information contact us by phone or email.