

General questions

How do antibodies function as part of an immune system?

Antibodies are a critical component of the defense arsenal assisting with identifying, capturing, and removing potential threats as well as protecting against future invasions. Antibodies are gammaglobulin proteins, predominantly referred to as immunoglobulins (Ig). A monomeric antibody is composed of two heavy chains and two light chains covalently linked together through disulfide bonds to generate a Y-shaped structure. This Y-shaped structure provides a bifunctional capacity: 1) antigen-binding through the Fab (antigen binding fragment), and 2) interaction with immune cells and proteins (fragment crystallizable or Fc) to initiate and regulate host defence mechanisms. More information on the fundamentals of antibody structure and function can be found at <https://mainebiotechnology.com/fundamentals-of-antibody-structure-function/>

What is the difference between monoclonal and polyclonal antibodies?

Polyclonal antibodies refer to a mixture of immunoglobulin molecules that are secreted against a particular antigen. They interact with different epitopes on the same antigen and their manufacture does not require the use of hybridomas.

Monoclonal antibodies refer to a homogenous population of antibodies that are produced by a single clone of plasma B cells. They interact with a particular epitope on the antigen and their manufacture requires the use of a hybridoma cell line.

How do I store and transport the material?

This varies between products, please consult the example Certificate of Analysis (found in the 'Technical Documents' section of the product page) for this information.

How is it supplied? (What is the products appearance?)

This varies between products, please consult the example Certificate of Analysis (found in the 'Technical Documents' section of the product page) for this information.

Does BBI manufacture its antibodies?

Yes, we manufacture many of our own products at our 2 manufacturing sites in Maine, USA and Porton Down, UK. All sites are ISO13485 certified.

What are the key features and benefits?

BBI Solutions offers a growing portfolio of performance proven antibodies. With our in-house custom antibody expertise, customers can rely on BBI to be a trusted partner in antibody support, from secure supply, to matched pair recommendations, and trouble shooting performance. Custom manufacturing lots and conjugation services are also value-added services available for most of our antibodies to suit your assay development needs.

What is a matched antibody pair?

A matched antibody pair consists of two antibodies, a capture and a detection antibody. In a matched pair, each antibody is specific for a different and non-interfering epitope of the antigen.

Antibody development

What technology do you use for monoclonal antibody development?

Hybridoma

What species options do you have in polyclonal?

Rabbit, Goat and Sheep

What methods of in-vitro production are you using?

Roller bottle for lot sizes up to 1gram

Hollow fibre continuous perfusion system for lot sizes greater than 1 gram.

How long does a custom development take?

4-6 months for a monoclonal antibody and 3-4 months for a polyclonal

What is the approximate budget?

A discussion with a service team member will be necessary regarding this, however monoclonal development projects start at \$20k and up

Is a monoclonal or a polyclonal antibody development strategy most suitable for my application?

As this is a complex subject, a separate FAQ has been written for it and can be found at <https://www.bbisolutions.com/en/services/antibody-services.html>