



CUSTOM ANTIBODIES

FabXpress Antibody Production Kit

Once you have evaluated your initial HuCAL® recombinant antibodies you may require more for your assay development or manufacturing. Depending on your final application and use, you could require a small or bulk quantity, and you may wish to have your antibody in alternative Fab formats or as a full length immunoglobulin for assay optimization and flexibility. Bio-Rad can carry out these services for you according to your particular requirements.

Alternatively if you have Fab antibody expression and purification expertise and resources available, you can bring the Fab antibody production into your lab; we facilitate this for you through our FabXpress Antibody Production Kit.

Take Control of Fab Antibody Production

- **Save time** - vector provided, no need for gene synthesis and cloning
- **Optimize assays** - flexibility to engineer your antibody or convert to another format
- **Manage production** - quality, quantity, inventory and costs under your control
- **Long-term security** - antibody sequence is known and stored long-term

FabXpress Antibody Production Kit Details

This kit enables you to carry out production of your critical antibody reagents, giving you control of quality, delivery and associated costs. It provides essential materials and a handbook with guidelines for expression and purification of a custom HuCAL Fab antibody selected as part of a custom HuCAL generation project.

The kit comprises:

- 1 Vector containing antibody gene fragments
- Antibody DNA and amino acid sequence, vector sequence
- Handbook for Fab expression and purification

Vector containing Fab antibody gene fragments

The antibody gene fragments are supplied in the same bacterial expression vector that was used for the initial custom project. If you wish to switch to an alternative format you can purchase selected additional empty expression vectors and clone the antibody gene fragments into a different Fab format (Table 1). Alternatively we can carry out the format change for you into any of our Fab formats, please inquire.



Table 1. Additional vectors available for expression of alternative Fab formats

Short Name	Description
Fab-FH	Monovalent Fab antibody (DYKDDDDK- and His-6-tags)
Fab-FSx2	Monovalent Fab antibody (DYKDDDDK- and StrepX-StrepX-tags)
Fab-dHLX-FH	Bivalent Fab Mini-antibody (DYKDDDDK- and His-6-tags)
Fab-dHLX-FSx2	Bivalent Fab Mini-antibody (DYKDDDDK- and StrepX-StrepX-tags)
Fab-A-FH	Bivalent Fab bacterial alkaline phosphatase fusion antibody (DYKDDDDK- and His-6-tags)
Fab-A-FSx2	Bivalent Fab bacterial alkaline phosphatase fusion antibody (DYKDDDDK- and StrepX-StrepX-tags)

Recommended bacterial strains

The bacterial strain is not included in the kit, and not all bacterial strains are suitable. For propagation of the plasmid or for Fab expression the *E. coli* cells need to be transformed with the provided plasmid. The pAbX expression vectors are optimized to work in the *E. coli* strain TG1. Note that this strain is susceptible to phage infection, as it carries an F-pilus encoding episome. A phage infection would strongly slow down bacterial growth. This is primarily important for labs working routinely with phages. By repetitive culturing of TG1F+ bacteria on rich medium, clones that have lost the episome can be selected, as the maintenance of the F' episome requires regular passaging on M9 minimal agar plates. Other bacterial strains can also be used, e.g. BL21, JM83 or TOP10. For TOP10 a lower yield is to be expected.

In general it is important to ensure that the strain contains no natural resistance to chloramphenicol. Also, possible methylation of DNA by methyltransferases should be considered when digesting DNA with restriction endonucleases because cleavage can be blocked or impaired when a particular base in the recognition site is methylated. XbaI, which is used for cloning of the Fab genes, is sensitive to methylation by the Dam methylase. Therefore, the plasmid should be propagated in a Dam methylation deficient strain.

Fab antibody DNA and amino acid sequence

The kit includes the sequence of the light chain, Fd chain and tags and the sequence of the chosen vector (GenBank file) in electronic format.

The antibody sequence alone can be purchased for electronic storage of the DNA and amino acid information or for gene synthesis.

Handbook with guidelines for expression and purification

The handbook gives an overview of the HuCAL technology, Fab formats and expression vectors, along with our recommendations for cloning, expression, purification and QC. A troubleshooting guide, list of references and the source of recommended reagents are also included.

Any antibody produced by you remains subject to the same terms and conditions agreed to for the original antibody generation project. Consult our terms and conditions at bio-rad-antibodies.com/hucal-terms-conditions-of-use.html for further details.

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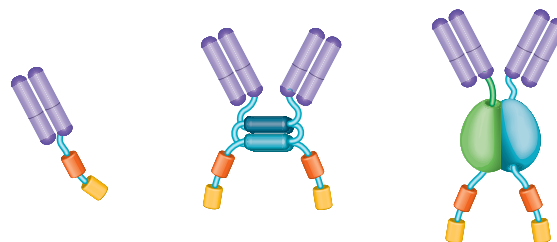
Table 2. Ordering information for FabXpress Antibody Production Kit and related services

Products for Customer Antibody Production	Catalog Number
FabXpress Antibody Production Kit <ul style="list-style-type: none">• 1 Vector containing antibody gene fragments• Antibody DNA and amino acid sequence, vector sequence• Handbook	CAB11583
Fab expression vector (with stuffer fragment) <ul style="list-style-type: none">• See Table 1 for available vectors	CAB11584
Antibody DNA and amino acid sequence <ul style="list-style-type: none">• Light chain, Fd chain and tags in electronic format	CAB11582

Custom Services We Provide	Catalog Number
Conversion of Fab antibody to alternative Fab format	CAB11552
Production of Fab antibody, 250 µg	CAB11554
Production of Fab antibody, per mg	CAB11556
Conversion to full immunoglobulin (Ig) format and test expression of up to 1 mg	CAB11571
Production of Ig antibody, 250 µg	CAB11558
Production of Ig antibody, per mg	CAB11559

Whether you decide to leave the production to our experienced team, or opt to bring it into your lab, we know your ultimate aim is to have a high quality, consistent product, available when you want it and at good value. Our technical experts are available to guide you and offer advice according to your particular needs.

Contact us at antibody_sales_muc@bio-rad.com or call us on (00) 49 89 80909545.



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