

Custom Protein Production Services - Cloning

BioServ UK's dedicated molecular biology team provides a broad range of cloning services and proprietary vectors for successful recombinant protein expression.

Cloning service:

- Codon optimisation and design service
- Gene synthesis
- Standard and non-standard restriction enzyme cleavage
- Clone into any vector of your choice: including all standard or licence free vectors
- Tags: polyHis, SuMO, GST, FLAG, V5, Myc, MBP, NusA, Strep-tag
- Time scale: 2-3 weeks
- Quality assured and sequence verified

Licence free proprietary vectors:

- Based upon same core plasmid backbone
- Available for bacterial, insect, and mammalian expression
- Standard or custom designed
- Dual expression versions
- Modular design
- Choice of 156 individual components including: promoters, reporters, antibiotic resistance, origins, tags, signal peptides and more



Custom Protein Production Services – Expression & Purification

With dedicated teams and extensive experience our UK based facility provides a wide range of high quality services.

Expression service:

- Platform: Bacterial, insect (baculovirus, Sf9 or Hi5), mammalian (transient and stable), hybridoma
- Screening: strains, clones, media
- Trial expression: < 0.5 litres
- Small scale expression: < 10 litres
- Large scale expression: 50-250 litres
- Analysis: SDS-PAGE, Western blot

Purification service:

- Untagged
- Tag removal: TEV, enterokinase, thrombin
- Affinity: SuMO, polyHis, GST, Biotin, Fc, MBP etc
- Ion-exchange and size-exclusion chromatography

Additional services:

- Method development
- Labelling: Selenomethionine, Selenocysteine, N¹⁵
- Validated ELISA assay development
- Endotoxin removal from protein sample
- Fragmentation: Fab and Fab' generation
- Cell line banking and storage

Time scale: (1 litre expression and purification)

- Bacteria: 2-3 weeks
- Insect cells (baculovirus): 4-5 weeks
- Insect cells (stable): 6-7 weeks
- Mammalian: 6-7 weeks

Custom Peptide Synthesis

BioServ UK provides a high quality custom peptide synthesis service with expertise in modified and difficult peptides.

Peptide service:

- Epitope design & prediction
- Sequence: 2 to 100 amino acids
- Purity: Crude to >98%
- Quantity: Milligrams to 100 grammes
- Quality: Full mass spec and HPLC analysis
- Time scale: 2-3 weeks

Peptide antigens for antibody production:

- Conjugations: KLH, BSA and OVA

Modified and difficult peptides:

- Hydrophobic peptides
- Non-standard amino acids: Phosphorylated, D-isomers, methylated, non-natural
- Spacers and linkers: PEG, AVA, GABA, AEA, Gly, ANP
- Labels: Biotin, FITC, 6-FAM etc
- Cyclic peptides: Disulphide or amide terminal/side chains
- N (NH₂) & C (COOH or CONH₂) terminal

