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# Services

## Advantages & features

- ✓ **Top quality:** experienced and well trained staff and reliable Canvax's innovative products used ensure you the highest quality standards.
- ✓ **Results guaranteed:** our team performs all this tasks daily, to premium customers or to our leading R&D.
- ✓ **Trustworthy:** confidentiality agreement, experienced technical advice, regular updates, and much more.
- ✓ **Custom-tailored and Modularised services:** to assure that every step meets your needs.

## Custom cloning

As a highly expert company in cloning and expression, Canvax offers time-saving services for plasmids with different antibiotic markers, copy numbers, promoters, tags or fusions. Our team synthesize daily genes and sequences of any origin and sub-clone them in the most suitable customized-vector depending on your needs: constitutive or inducible expression, translation-transcriptional reporters, introduction of selectable markers for stable cell line generation, IP-free plasmid backbones or "de novo" constructions and much more.

**Some examples of the services that Canvax offers:**

- PCR cloning & subcloning.
- Screening and transformation of *E. coli*.
- Gene synthesis.
- Minipreps and maxipreps.
- DNA barcoding.
- Restriction, purification and ligation of DNA.
- Transcriptional and translational fusions.
- Epitope tagging.
- Competent cells production.

## RNA services

**Thanks to our deep understanding of RNA, Canvax offers high level services like:**

- cDNA synthesis.
- sRNAs analysis.
- Quantitative RT-PCR analysis.
- RNA extraction/isolation.
- Northern blot.
- *In vitro* RNA transcription.
- RACE.

## Molecular Microbiology

**Some examples of the genetic tools Canvax can use and customize are:**

- Engineering yeast, Gram-positive and Gram-negative bacteria, with bio-safety levels 1 and 2.
- Versatile shuttle vectors to introduce exogenous DNA in certain bacterial species using plasmids and phages.
- Random mutagenesis and overexpression process including transposition, bank generation and screening steps.
- Reporter genes based on fluorescence or luminescence.
- Chromosomal gene inactivation and aminoacidic changes in different bacterial species.

## R&D Services

**Canvax is expert in designing and constructing microorganisms with broad biotechnological applicability, such as:**

- Probiotics.
- Live attenuated vaccines (LAV).
- Subcellular vaccines.
- Biofactories for recombinant proteins and molecules.
- Amino acid, mineral and vitamin-enriched food supplements.

## Protein Expression Services

**Our high level Protein Expression Services in Bacteria, Baculovirus and Mammalian from gene cloning to large-scale production, include:**

- Codon optimization.
- POC assays expression in bacterial and yeast platforms.
- Small scale recombinant protein production.
- cDNA Synthesis & Cloning.
- Expression trials.
- Double affinity-exclusion purification steps to 20 mg.

## Polyclonal & Monoclonal Antibody Production

**Thanks to our novel Recombinant Antibodies Technology, Canvax offers high quality Polyclonal and Monoclonal antibody Production services, in rabbit and mouse, or additional services like:**

- Protein A Antibody Affinity purification.
- Peroxidase & Biotin coupling.
- Functional validation in ELISA.
- Western Blot.
- Immunohistochemistry.
- Flow cytometry services for analysis and sorting of cells.
- Purification by protein G.
- Antibody Isotyping and Characterization assays.
- Liquid N2 storage (1 year).
- Hybridoma cell culture and antibody purification.
- Production and purification of scFvs, Fabs, vNARs or VHh.

Canvax performs all its procedures, protocols and animal experimentation care according to the specifications established on "Protection of animals used for experimentation and other scientific purposes" in Spanish Real Decreto 21/10/2005.