

## Input Data

The antibodies produced may be directed against:

- Proteins (in solution, lyophilized, integrated in a polyacrylamide gel)
- Inactivated microorganisms (algae, yeasts, bacteria, viruses)
- Haptens (nucleotides, chemical molecules, peptides)

We shall work from your immunogens or a synthesized peptide from your protein sequence.

## Technologies

### Peptide Synthesis

Peptides are synthesized by Fmoc chemistry. We recommend co-immunizing all animals with at least 2 peptides because the recognition rate of the native protein will increase. Indeed, the immune system will be more stimulated and its detection sensitivity will improve.

Various modifications can also be performed: phosphorylation, biotinylation, amidation, etc.

### Animals

The immunization shall be mainly conducted on New-Zealand rabbits from a Specific Pathogen Free breeding.

We recommend 2 rabbits shall be immunized because the immune response may vary from one animal to the other.

We also offer the possibility to immunize other animal species: Guinea pigs, rats, mice, goats, etc.

### Protocols

According to the immunogenicity of the antigen and your time constraints, we offer three standard protocols:

- A short protocol of **53 days: 3 injections** - 1 test sample
- An intermediate protocol of **67 days: 4 injections** - 2 test samples
- A long protocol of **88 days: 4 injections** - 2 test samples

## Programme

1. Definition of the specifications and selection of the programme
2. Preparation of the peptide(s) (within the context of an anti-peptide project)
  - Determination of the peptide sequence(s) that will ensure an optimal immune response
  - Peptide synthesis
  - Coupling of the peptide on a carrier protein (KLH, OVA, BSA)
3. Shipping of pre-immune sera for the animal selection (option only provided with rabbits) and transfer to the experimental zone.
4. Injection cycle (x3) according to the selected protocol
5. First test sample to control immunoreactivity (ELISA assay is optional)
6. Intermediate and long protocols: 4<sup>th</sup> injection (3rd booster dose) and 2<sup>nd</sup> test sample

When the immunization protocol comes to a close, we do not systematically euthanize the animals but let the client decide to:

- Request final samples
- Request one or several additional samples to have a higher volume of serum
- Continue immunizations to improve serum immunoreactivity.

## Deliverables

At the beginning of the service, the client shall receive an immunization protocol with the dates of the steps.

During the project, the client may request intermediate samples to run additional tests and when the serum immunoreactivity follow up option was selected, the client receives detailed results from the ELISA assays.

At the close of the project, the client shall receive:

- Final sera (50-80mL per rabbit)
- Purified antibodies with a purification report (when the purification option was ordered)
- The antigene remainder
- An immunoaffinity column (within the context of anti-peptide projects).

## Rates

In addition to standard protocols (from €730), P.A.R.I.S developed complete packages (immunization – ELISA follow up - purification) at competitive rates making it possible to produce antibodies perfectly adapted to the specifications of the client and with high quality services.