

POLYCLONAL ANTIBODIES

ANTI-PROTEIN



Expert in Antibody Engineering

From Research to Discovery

ISO 9001 : 2015 certified

covalab
R&D in Biotechnology

PROTOCOL OVERVIEW

1

IMMUNOGEN

SUPPLY BY YOU

Soluble protein, microorganisms, etc... you supply your own immunogen for the immunization.

PRODUCE BY COVALAB

We offer production of recombinant protein in prokaryote or eukaryote system (Contact us for more details).

3

IMMUNIZATION PROTOCOLS

SPECIFIC TO THE ANTIGEN AND HOST

Our protocols are optimised according to the host species in order to ensure the best immune response.

SPECIFIC TO YOU

Specific and personalised protocols can be run upon request.

2

HOST SPECIES

8 CHOICES

Find your perfect host among rabbit, mouse, rat, guinea pig, goat, sheep, chicken or llama !

4

ADDITIONAL SERVICES

PRE-IMMUNE SERA

Test different sera in your specific conditions and choose the most suitable hosts.

ELISA & PURIFICATION (PACK SERVICE)

ELISA tests are running to follow sera immunoreactivity and react if needed. Part of the final sera is purified.



CUSTOM POLYCLONAL ANTIBODIES

During the immune reaction, antigen-processing cells activate quiescent B-cells into plasmocytes to secrete immunoglobulins directed against that antigen.

Each plasmocyte produces immunoglobulins that are specific for one epitope of a given antigen.

Polyclonal antibodies are composed of a mix of immunoglobulins secreted by multiple plasmocytes clones, and thus recognise multiple epitopes on one antigen.

COVALAB, YOUR PARTNER IN ANTIBODY ENGINEERING SINCE 1995

— — MADE IN FRANCE - ISO 9001 : 2015 CERTIFIED

Advantages

Ready-to-use serum

Multi-epitope specificity is useful in **detection** and **capture applications** (IP and ChIP)

Protocols are **well-proven** and relatively **short**

Drawbacks

High cross-reactivity due to non-specific antibodies contain in the serum

Limited quantity and no reproducibility between projects

↪ *Real issue? Prefer our monoclonal antibodies development !*

OUR OFFERS

STANDARD PROJECT

IMMUNOGEN

Send us your immunogen.
OR

Covalab produces your protein with prokaryote or eukaryote systems.

HOST IMMUNIZATION

You received intermediates test sera to run tests in your specific condition.

PACK PROJECT

STANDARD PROJECT

(see opposite)

+

IMMUNOREACTIVITY MONITORING

ELISA test for every sample to follow the immunoreactivity.

+

SERA PURIFICATION

Purification up to 5 mL of the final immune sera.

DETAILED PROTOCOL



1.

IMMUNOGEN

The selection and study of the immunogen is an important step to ensure a better immune response in the host.



Soluble proteins⁽¹⁾

In solution
Lyophilised
Within polyacrylamide gel



Microorganisms

Inactivated virus
Inactivated bacteria
Inactivated yeast



Others

Cell extracts
Tissue extracts
Others (*please contact us*)

Depending on the host animal species you choose to develop your polyclonal antibody, our **STANDARD** immunization protocol requires between **300 µg and 1.2 mg**.

Our **PACK** services require between **1.5 and 2.5 mg** to run the immunization and perform ELISA monitoring and purification.

⁽¹⁾ Covalab offers production of recombinant protein in prokaryote or eukaryote system. Contact us for more details.

2.

HOST SPECIES

The most common host animal is the New Zealand white rabbit as it used to show a good immunoreactivity and offer a good ratio between the large volume of serum at the end and its price.

We recommend to immunise at least two animals, due to the variability of the immune response to a given antigen between individuals.



Rabbit

Test serum : 5 - 15 mL
Final serum : 70 - 100 mL



Mouse

Test serum : 30 - 50 µL
Final serum : 0.5 mL



Rat

Test serum : 200 - 300 µL
Final serum : 2.5 - 3 mL



Guinea pig

Test serum : 200 - 300 µL
Final serum : 5 - 10 mL



Chicken⁽¹⁾

Test serum : 1 - 2 mL
Final serum : 5 - 10 mL



Goat

Test serum : 5 - 20 mL
Final serum : 1 000 mL



Sheep

Test serum : 5 - 20 mL
Final serum : 1 000 mL



Llama

Test serum : 10 - 20 mL
Final serum : 500 mL

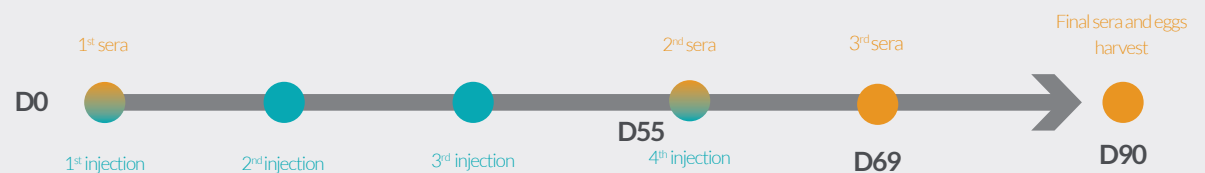
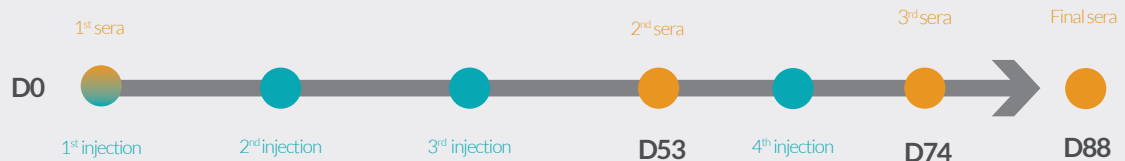
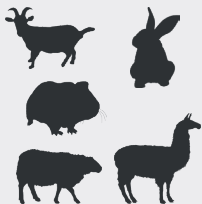
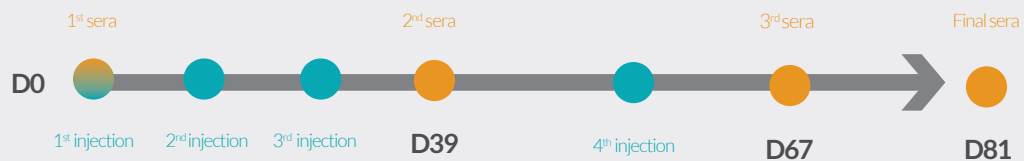
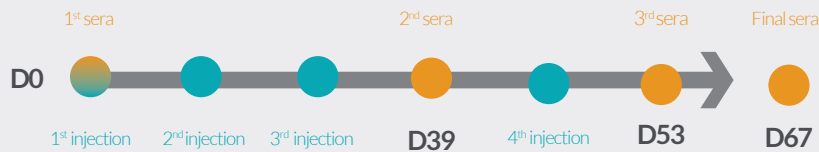
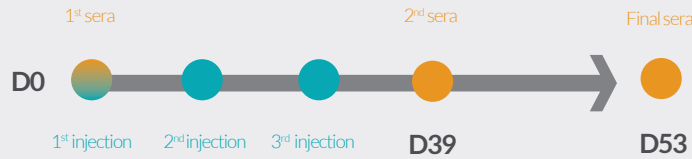
⁽¹⁾ Chickens produce unique class of immunoglobulins called IgY, in their eggs, which are functionally equivalent to mammalian IgG. Due to the phylogenetic separation between birds and mammals, chickens are more likely to produce an immune response against conserved proteins within the class of mammals. Moreover, as the structure of the Fc region of chicken IgY is sufficiently different from mammalian IgG, the background signal in very sensitive immunological applications is dramatically reduced.

3.

IMMUNIZATION PROTOCOLS

Every species has its own immunoreactivity towards an antigen. The frequency, quantity and volume of injections must then be carefully adapted. Our strong experience allowed us to optimize protocols for each species, thus maximizing the probability to generate high amounts of specific polyclonal antibodies.

On request, pre-immune sera can be tested in order to choose the most suitable hosts (lower background). Indeed, test sera from several animals per project can be tested in your specific conditions to select the best animals to be immunised.



All the experiments are carried out by experienced and authorised personnel according to H&S procedures, established in accordance to the French legislation. Our animal house is registered under the reference C21 464 04 EA.

YOU RECEIVE



- A **provisional calendar** with the main steps of the protocol: injections, sera and deliveries.
- The **intermediate test sera** to run tests in your specific conditions.
- The **final sera** and the remaining immunogen.

IN ADDITION WITH THE PACK OPTION

- **ELISA results** for each serum, showing their immunoreactivity and their evolution over the protocol.
- Part of the final immune sera **purified** on a protein A or G column (immunopurification on request) or, for chicken, **purified** IgY from 3 egg yolks.
- **Data report** showing the conditions and results of the purification.

SCIENTIFIC
SUPPORT
EXPERTISE
HIGH
QUALITY
REACTIVITY
FLEXIBILITY
SINCE 1995

covalab
R&D in Biotechnology

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ISO 9001:2015

BUREAU VERITAS
Certification

