

# Sheep Custom Polyclonal Antibody Production

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Our custom polyclonal antibody development package may be tailored to meet your specific project requirements.

## 1. Peptide synthesis

If required a supplied peptide sequence can be synthesized for use as the immunogen (approximately 15-20 mg at >75% purity depending upon sequence).

## 2. Peptide or small molecule conjugation

If the immunogen is a small molecule or peptide it may be necessary to conjugate it to a high molecular weight carrier protein e.g. CCH, KLH or BSA (2-3 mg) in order to elicit a good immune response. If required this service can be undertaken (subject to the chemical nature of the antigen) prior to the immunization protocol.

## 3. Protein antigen supply by the customer

A minimum of 3 mg protein/antigen at a concentration of at least 1 mg/ml is needed for immunizing a sheep for a standard 15 week project. If ELISA screening is required then an additional 1 mg will be needed. If affinity purification is requested then an additional 5-10 mg will be required. All customer supplied antigens must be accompanied by a COSHH assessment of any potential risks or hazards associated with handling or use of the antigen.

## 4. ELISA screening

If requested all bleeds from a 15 week project can be ELISA screened against the customers immunizing antigen, which must be supplied by the customer at the commencement of the project.

## 5. Serum purification

Protein A, Protein G, ammonium sulfate and peptide affinity purification (free N-terminus or terminal cysteine) are offered for purification of the immunoglobulin. Typical yield from 25 ml of affinity purified sera using protein G chromatography is 2-3 mg/ml purified antibody.

In order for us to satisfy Home Office requirements a brief justification for the project must be submitted prior to commencement.

## Protocols & Additional Services

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### Project inclusive of

- Cost of sheep plus housing for the term of the project
- Pre-immune bleed (3-4 ml) if requested
- 4 immunizations per sheep
- Test bleed (3-4 ml) after second immunization if requested
- Collection of production bleeds (approximately 350 ml per bleed) after the third and fourth immunizations, each accompanied by a 3-4 ml test bleed
- For larger scale production the project may be extended up to 100 weeks per sheep on a monthly basis

### Standard immunization protocol

Day 0	Pre-immune bleed if requested, first immunization (1 mg peptide, CFA)
Day 28	Second immunization (0.5 mg peptide, IFA)
Day 42	Test bleed if requested
Day 56	Third immunization (0.5 mg peptide, IFA)
Day 70	Production bleed (approximately 350 ml) with test bleed
Day 84	Fourth immunization (0.5 mg peptide, IFA)
*Day 98	Final production bleed (approximately 350 ml) with test bleed

\* We must receive customer instructions for continuation of project past Day 98 at least 2 weeks prior to last production bleed.

Polyclonal antibody development is also available in rabbit and goat. Please inquire for polyclonal antibody development in other species.

We also offer a custom antibody conjugation service providing an extensive range of markers including Alkaline Phosphatase (AP), Biotin, Horseradish Peroxidase (HRP), and a variety of fluorochromes to conjugate to the purified antibody.

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**To discuss your custom polyclonal antibody development project please contact us.**

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