

Immunology Custom Services

Peptides & Antibody Development/Production

Custom peptide synthesis

Interchim provides peptides from mg to grams, with various purities (70-95%) according to your applications. Some modifications can be customized as acetylation, phosphorylation, biotinylation...Peptides can be conjugated to a carrier (for immunization of animals, and for Ab monitoring; see below).

Ask for a study of the immunogenicity of your peptide, to synthesize the appropriate sequence and produce a highly specific and affine antibody.

Custom Antibody Development/Production

- ◆ The antibody you are looking for is not available in the market ?
 - ◆ You would like to get special features (specificity, buffer...)?
 - ◆ You would like to reduce cost for higher quantity ?
 - ◆ You want to save time and focus on your goals ?
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- Interchim offers a personalized study of your needs
 - Interchim develops antibody to meet your need
 - The immunization can be corrected if needed

Over standard programs (polyclonal in rabbits, monoclonal in mouse), INTERCHIM proposes a unique development of Mouse polyclonal antibodies.

Immunogen

You can either choose to supply the antigen (purified recombinant protein, peptide...) or ask Interchim to source/produce it for you.

For peptides, Immunopure Grade (>70%) is necessary to perform good immunization. We can also conjugate the antigen to the appropriate carrier. KLH is usually used but other carriers as ovalbumin, thyroglobulin, Maxibind proteins are also available.

Rabbit polyclonal antibody production

Interchim offers a standard protocol of 82 days (5 injections, 4 bleedings) in 2 rabbits.

- ◆ If desired, we can follow your own protocol
- ◆ Pre-immune serums can be tested before immunization
- ◆ Immunization can be done with several peptides
- ◆ Intermediate samples are conditioned with or without preservative and can be kept or sent for test, in course or at the end of the program
- ◆ You are the one to decide to sacrifice the animals or to prolong the program
- ◆ We can monitor the serum titer by ELISA testing and report it to you in real time

NEW ! Mouse POLYCLONAL antibody production

Interchim has developed an innovative protocol, allowing to obtain several polyclonal milliliters for one mouse (about 3-5 ml compared to ~200µl with classical methods). This breakthrough allows us to offer a unique program :

Mouse polyclonal program : 10 (+ 2 free) = 12 individuals

Compared to standard rabbit programs (2 rabbits), benefits include :

- ◆ Much more chance to get excellent responders and to obtain high titer, specificity, affinity antibodies
- ◆ Shorter immunization program (60 days)
- ◆ Same (or even smaller) quantity of antigen needed
- ◆ Increase chance of getting a serum able to recognize native protein (even with peptide immunization)
- ◆ You can decide to "immortalize" a great antibody by switching for a MONOCLONAL program, without wasting time !

The 12 mice program is recommended but we also offer the same program on 5+1 mice.

A 90 days protocol on 12 mice has also been developed. It is performed with free peptides (no carrier) and consequently increases chances to get a serum that recognizes native protein.

Mouse monoclonal antibody development and production

If one serum gives unsurpassed results, you may want to "save" it as a monoclonal antibody.

- ◆ Immunization on mouse is done under the same protocols as above
- ◆ Selected mice are stabulated for one month more
- ◆ An ELISA test is developed for screening
- ◆ Fusion and Screening are performed
- ◆ Clonage and Isotyping
- ◆ Production can be made *in-vivo* (ascites) or *in-vitro* (culture supernatant)

Monoclonal Antibody Production

If you developed your own hybridome, we can produce it for you : either *in vivo* (mice ascites) or *in vitro* (culture supernatant).

Antibody purification

Interchim offers custom purification for your polyclonal or monoclonal antibody, from simple fractionation to affinity purification.

- ◆ Ammonium sulfate precipitation (for IgG, A&M) : Total antibodies purity is 60-80%.
- ◆ Affinity chromatography on Protein A or G : Total antibody purity is 90-95% and sufficient for radiolabeling, conjugation and preparation of immunoaffinity columns.
- ◆ Immunoaffinity chromatography on a column grafted with the antigen : only the antigen specific immunoglobulins are purified for most demanding applications (reduced background).

Final product is sent with a complete report including a quality control of the purity by SDS PAGE electrophoresis. A quality control of the antibody activity can be performed by ELISA in option.

Interchim also customizes affinity supports for your own need of purification/ immunoprecipitation (i.e. immobilization of antigens or antibodies on agarose).

Antibody labeling

Interchim offer his know-how in proteins labeling (optimized protocols) with a variety of enzymes and fluorophores:

- ◆ FluoProbes (488, 546, 494, 642...)
- ◆ FITC
- ◆ Biotin
- ◆ Peroxidase
- ◆ Phosphatase alkaline

Please inquire for other bioconjugations (other molecules, other labels) or special formulations.

Other custom services (coating...)

- ◆ Protein study by HPLC, ELISA or Western Blotting
- ◆ Coating of peptide/protein on microplate/tube/magnetic beads
- ◆ Buffers production
- ◆ Assembling of kits
- ◆ Any services can be evaluated with our lab