

We have the Alpacas. We will make Nanobodies® for you.



Single domain antibodies (Nanobodies) are increasingly becoming popular as reagents for research, for use as therapeutics, and as reagents for diagnostics. This is due, in large part, to their small size, stability, high affinity, high specificity, ease of manipulation, and ease of production.

Through resources provided by the National Institute of General Medical Sciences, the University of Kentucky's COBRE Protein Core is now producing these single domain antibodies in alpacas as part of their fee for service structure. For investigators in IDEA states the cost of nanobody production is subsidized by our COBRE grant. To generate nanobodies, our facility immunizes alpacas with the protein of interest, amplifies the pool of nanobody cDNAs by PCR and generates a phagemid library, which is screened by panning. All positive clones are sequenced. The nanobodies produced are purified from *E. coli* and confirmed to bind to the antigen by direct pull-down

assays. Using this protocol we have had very high success rates.

We are now taking orders for producing nanobodies starting in May, 2018. The cost for successful nanobody production is \$8,000 per nanobody for academic investigators. **For investigators from IDEA states the supplemented cost will be \$5,000 per nanobody.** To produce a nanobody to your protein, we will need 3 mg of purified protein in PBS or HBS. There is a \$250 non-refundable setup fee, which will be deducted from the final charge. We will deliver 1 mg of your purified and validated nanobody within ~3-4 months. We will also ship you a sequenced bacterial expression vector that can be used for further nanobody production. If we identify additional nanobodies for your protein, they can also be purchased. In addition to your nanobody, a range of derivatives and conjugates are available.

To request a nanobody produced to your protein, please fill out and return the nanobody request form at our website by **April 16th** (<https://cobre.med.uky.edu/COBRE-nanobody>) or contact Lou Hersh at lhersh@uky.edu. **We will need your protein for nanobody production by April 27, 2018.**