



LAMPIRE
 BIOLOGICAL LABORATORIES
www.lampire.com

CUSTOM ANTIBODY PRODUCTS & SERVICES
 IMMUNOCHEMICALS & REAGENTS
 BLOOD & BIOLOGICAL PRODUCTS

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PRODUCTS & SERVICES

Immunochemicals &
 Related Reagents

Animal Blood Products &
 Tissues

Human Blood Products

LAMPIRE® Cell Culture Bag

Antibodies to Drugs of
 Abuse

Antibodies to
 Chemotherapeutic Agents

Polyclonal Antibody
 Services

Monoclonal Antibody
 Services

Peptide Synthesis
 Antibody Support Services

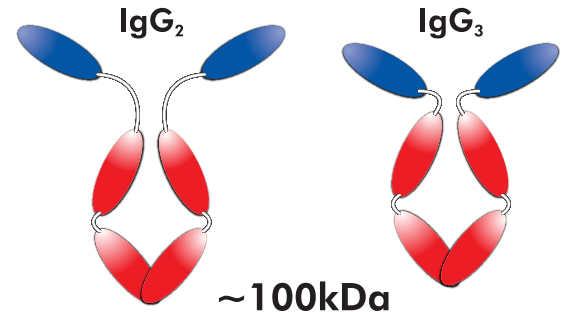
Cell Culture Services

Contract Manufacturing

Custom Llama Antibodies

Greater Stability • Enhanced Binding

Llama IgG1 is the conventional 4 chain structure. IgG2 and IgG 3 are heavy chain only. Heavy chain only structure is the smallest known antigen binding site generated by the mammalian adaptive immune system. Llama heavy chain antibodies lack both the light chain and the CH1 heavy chain of conventional IgG.



The advantages of Llama IgG include a longer and more diverse paratope than conventional structures and, unlike planar interactions with antigen surfaces with conventional structure, the heavy chain can form finger-like paratope formation to fill molecular clefts that are inaccessible to conventional antibodies. These smaller VHH domains show good tissue penetration in vivo and reduce anti-VHH response. The VHH domain that interacts with the contact areas of VH and VL domains is composed of hydrophilic residues that provide good solubility and stability of recombinant VHH domains. The result is the potential for superior performance in IHC, neutralizing and small epitope applications.

Llama antibodies have shown superior resistance to heat and drying conditions and the ability to refold and maintain activity. Standard protocols are used for production and processing of the antiserum.



**Technical
 Expertise**



**Proven
 Success**

We're not just Anybody... We're Antibodies!

With LAMPIRE's extensive technical expertise, you will find the best custom antibodies services available worldwide and at the most affordable cost. Before your project begins, our expert staff will review your antigen to evaluate its immunogenicity, discuss with you the intended applications of the antibody, then outline an optimal immunization protocol for your specific project. Feedback is provided at each step to keep you informed and involved. Save even more time, effort and cost by taking advantage of LAMPIRE's Antibody Support Services. These services are quick, efficient, and reliable.

To discuss any of our services or inquire about any other of Lampire's offerings, please call us at 215-795-2838 or email lampire@lampire.com.