

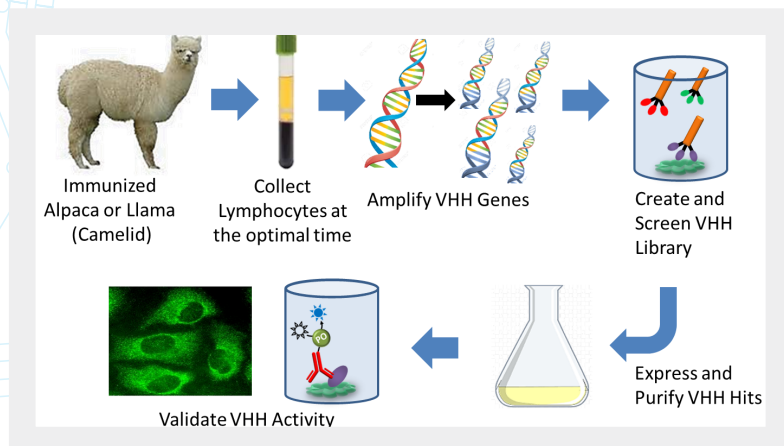
INTRODUCING NEW

# Secondary Antibodies For VHH Discovery

Optimize  
VHH antibody  
development

JIR presents Anti-Alpaca IgG, Subclass and VHH domain secondary antibodies to optimize VHH (single domain) antibody development and application.

## Pathway to recombinant VHH antibody development



The development of high affinity VHH antibodies follows the well-established pathway shown. JIR Anti-Alpaca antibodies can be utilized at specific stages to expedite and enhance the development of high affinity VHH antibodies.

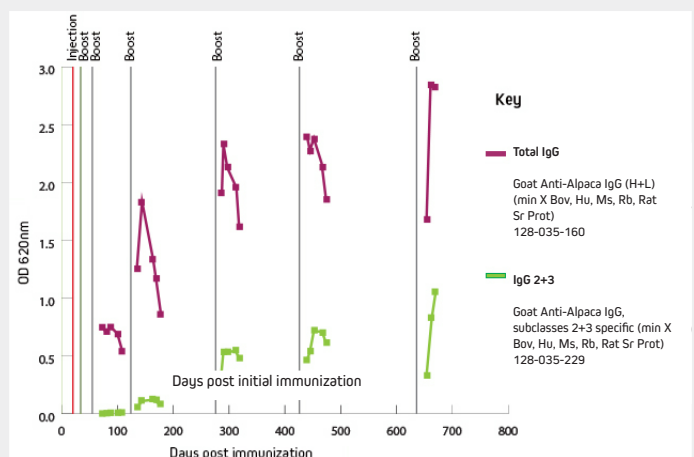
**The success and speed of discovering high quality VHH candidates is optimized by the fidelity and utility of the tools used at each step.**

## Monitor IgG 2+3 subclass titer to ideally time PBMC harvest

Use JIR Anti-Alpaca IgG, subclasses 2+3 to time PBMC harvest for VHH library construction. The VHH domain is located on these subclasses only. Subclass 2+3 response may mature differently from total IgG, and monitoring serum conversion of these antibodies can inform the decision to harvest PBMCs.

Timing PBMC harvest based on total IgG titer might suggest a collection point at 150 days, but the IgG 2+3 response was not maximal until after 300 days post immunization.

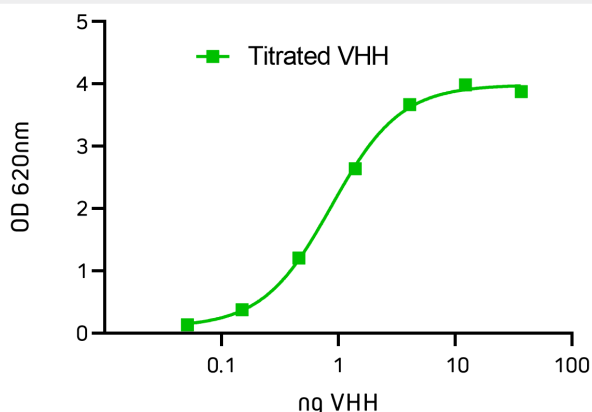
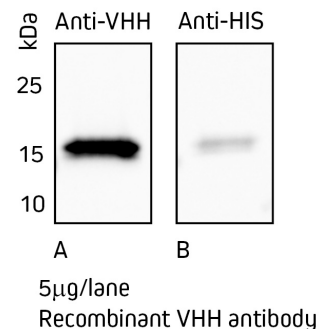
This ELISA data shows the antibody subclass repertoire in response to the immunogen over time. Antiserum was used to detect the coated immunogen, and peroxidase-conjugated secondary antibodies were used to compare total IgG to IgG subclasses 2+3.



## Enhance detection of VHH antibodies using Goat Anti-Alpaca IgG, VHH domain

Anti-Alpaca IgG, VHH domain antibodies show amplified signal compared to an anti-tag antibody.

Polyclonal antibodies that broadly recognize many epitopes on VHH deliver additional signaling molecules (e.g. fluorophores or enzymes) vs. antibodies narrowly focused on small peptide sequences. In this figure, a His6 tagged recombinant VHH was detected by western blot using Goat Anti-VHH domain antibody or an anti-His6 antibody.



## Test for VHH expression and binding activity with greater confidence

Screening VHH-expressing clones for solubility and binding activity is commonly done by ELISA. Significant signal can be obtained even at low VHH concentrations. In this panel, VHH was titrated across its coated immunogen and detected with Peroxidase conjugated Goat Anti-Alpaca VHH domain antibody.

AffiniPure™ Secondary Antibodies	Product Code
Goat Anti-Alpaca IgG (H+L)	128-005-003
Goat Anti-Alpaca IgG (H+L) (min X Bov, Hu, Ms, Rb, Rat Sr Prot)	128-005-160
Goat Anti-Alpaca IgG, subclasses 2+3 specific (min X Bov, Hu, Ms, Rb, Rat Sr Prot)	128-005-229
Goat Anti-Alpaca IgG, VHH domain (min X Bov Sr Prot)	128-005-232
Goat Anti-Alpaca IgG, VHH domain (min X Bov, Hu, Ms, Rb, Rat Sr Prot)	128-005-230

\*These antibodies react primarily with the Fc region, and are not recommended for detection of VHH antibodies.

## Available in a wide range of conjugate options

Horseradish Peroxidase

DyLight™ 405

Cy™ 3

Alexa Fluor® 594

Alkaline Phosphatase

Alexa Fluor® 488

R-Phycoerythrin (R-PE)

Alexa Fluor® 647

Biotin-SP

Fluorescein (FITC)

Rhodamine Red™-X

Cy™ 5

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