

# Anti-Human IgG(Fcγ fragment specific), AlpSdAbs® VHH (Biotin)

## Summary

Code	023-101-004
Immunogen	Recombinant Fc region of human IgG
Host	Alpaca pacous
Isotype	VHH domain of alpaca IgG2b/2c
Conjugate	Biotin-SP (long spacer)
Specificity	Human IgG(Fcγ fragment specific)
Cross-Reactivity	Recognizes human IgG Fcγ fragment specifically, and reacts with cynomolgus IgG. No Cross-reactivity to rabbit, mouse, rat, goat IgG
Purity	Recombinant Expression and Affinity purified
Size	100ug
Buffer	10mM PBS (pH 7.5), 0.05% sucrose, 0.1% trehalose, 0.01% proclin300
Formation	Freeze-dried Powder, Store at 2-8°C
Rehydration	Rehydrated by 100uL dH2O(Final concentration:1mg/mL)
Storage after Rehydration	-20 °C(Avoid freeze/thaw cycles), Stable for 12 months at -20°C

## Description

Anti-Human IgG(Fcγ fragment specific), AlpSdAbs® VHH(Biotin) is designed for detecting human IgG Fcγ fragment specifically. Anti-Human IgG(Fcγ fragment specific), AlpSdAbs® VHH(Biotin) is based on monoclonal, recombinant single domain antibody to human IgG Fc coupled to Biotin. Based on immunoelectrophoresis and/or ELISA, Anti-Human IgG(Fcγ fragment specific), AlpSdAbs® VHH(Biotin) reacts with the Fc fragment of human IgG heavy chain but not with the Fab portion of human IgG.

## Background

In mammals, antibodies are classified into five main classes or isotypes – IgA, IgD, IgE, IgG and IgM. They are classed according to the heavy chain they contain – alpha, delta, epsilon or mu respectively. IgG is the most abundant antibody in normal human serum, accounting for 70-85% of the total immunoglobulin pool. Human IgG consists of four human subclasses (IgG1, IgG2, IgG3 and IgG4), and each contains a different heavy chain. The whole IgG molecule possesses both the Fc region and the Fab region, which possessing the epitope-recognition site. The IgG contains two heavy and light chains(kappa or lambda). The heavy chain is about 50 KD and the light chain is about 25 KD. The common IgG is monomeric with a molecular weight of approximately 150 KD.

VHH are single-domain antibodies derived from the variable regions of heavy chain of Camelidae immunoglobulin. The size of VHH is extremely small(<15kDa) compared to other forms of antibody fragment, which significantly increase the permeability of VHH. Thus VHH is considered of great value for research, diagnostics and therapeutics.

## Benefits

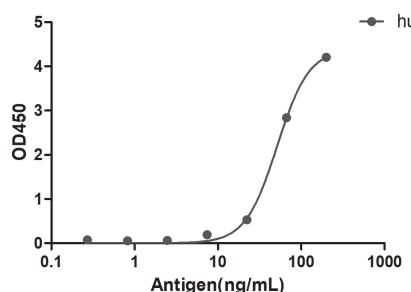
High lot-to-lot consistency  
Increased sensitivity and higher affinity  
Animal-free production

## Suggested Working Concentration

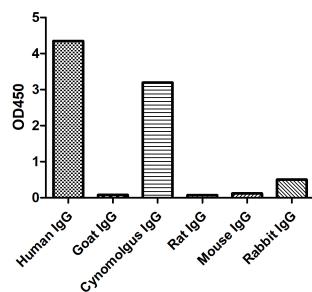
ELISA 1:10000-1:50000  
WB 1:10000-1:50000

Dilution factors are presented in the form of a range because the optimal dilution is a function of many factors, such as antigen density, permeability, etc. The actual dilution used must be determined empirically.

This product is for research use only and is not approved for use in humans or in clinical



A titer ELISA of human IgG. The plate was coated with different amounts of human IgG. 1:10000 dilution of Anti-Human IgG(Fc<sub>y</sub> fragment specific), AlpSdAbs<sup>®</sup> VHH (Biotin) was used as the primary antibody. An HRP conjugated streptavidin as the secondary antibody.



ELISA of specificity for different species of IgG. The plate was coated with 2ug/ml of different IgG. 1:1000 dilution of Anti-Human IgG(Fc<sub>y</sub> fragment specific), AlpSdAbs<sup>®</sup> VHH(Biotin) was used as the primary antibody. An HRP conjugated streptavidin as the secondary antibody.

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