

# Anti-Human IgG(CH3 Fragment specific), AlpSdAbs® VHH(Biotin)

## Summary

Code	023-113-004
Immunogen	Human IgG
Host	Alpaca pacous
Isotype	VHH domain of alpaca IgG2b/2c
Conjugate	Biotin
Specificity	Human IgG CH3 fragment
Cross-Reactivity	Cross-react with cynomolgus IgG, No cross-reactivity with rabbit, mouse, rat, goat IgG
Purity	Recombinant Expression and Affinity purified
Concentration	1mg/ml
Formation	Liquid, 10mM PBS(pH 7.5), 0.05% sucrose, 0.1% trehalose, 0.01% proclin300
Storage	Store at -20 °C(Avoid freeze / thaw cycles)

## Description

Anti-Human IgG(CH3 Fragment specific), AlpSdAbs® VHH(Biotin) is designed for detecting human IgG CH3 fragment specifically. Anti-Human IgG(CH3 Fragment specific), AlpSdAbs® VHH(Biotin) is based on monovalent, recombinant single domain antibody to human IgG CH3 fragment coupled to Biotin. Based on immunoelectrophoresis and/or ELISA, Anti-Human IgG(CH3 Fragment specific), AlpSdAbs® VHH(Biotin) reacts with human IgG CH3 fragment selectively, no reactivity with rabbit, mouse, rat, goat 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, gamma 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 heavy chain chains consist of a variable domain, VH, and three constant domains CH1, CH2, and CH3. 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

## Application notes

**ELISA** 1:5000-1:20000  
**IP** 1-2ug/sample  
**BLI** (biolayer interferometry)  
**SPR** (surface plasmon resonance)

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