Anti-Human IgM, AlpSdAbs® VHH(HRP)

Summary

Code	023-110-005
Immunogen	Human IgM
Host	Alpaca pacous
Isotype	VHH domain of alpaca IgG2b/2c
Conjugate	HRP
Specificity	Human IgM
Cross-Reactivity	Does not bind to human IgG, IgD, IgA, IgE
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, 50% Glycerol
Storage	Store at –20 °C(Avoid freeze / thaw cycles), Stable for 12 months at -20°C

Description

Anti-Human IgM, AlpSdAbs® VHH(HRP) is designed for detecting human IgM specifically. Anti-Human IgM, AlpSdAbs® VHH(HRP) is based on monovalent, recombinant single domain antibody to human IgM coupled to HRP. Based on immunoelectrophoresis and/or ELISA, Anti-Human IgM, AlpSdAbs® VHH(HRP) reacts with human IgM chain selectively, no reactivity with human IgG, IgA, IgD, IgE.

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. IgM normally constitutes about 10% of serum immunoglobulins. IgM antibody is prominent in early immune responses to most antigens and is largely confined to plasma due to it's large size. Monomeric IgM is expressed as a membrane bound antibody on the surface of B cells and as a pentamer when secreted by plasma cells. IgM measurement yields information about the body's immediate resistance and response to infection as well as information related to specific diseases. Decreased levels are associated with immune deficiency states, hereditary deficiencies, and myeloma. Increased levels can be associated with Waldenstrom's macroglobulinemia, chronic infection and hepatocellular disease.

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 1:5000-1:20000

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.