abcam

Product datasheet

Avidity Toxoplasma gondii IgG ELISA kit ab247205

Overview

Product name	Avidity Toxoplasma gondii IgG ELISA kit
Detection method	Colorimetric
Sample type	Serum, Hep Plasma, Cit plasma
Assay type	Sandwich (qualitative)
Assay duration	Multiple steps standard assay
Species reactivity	**Reacts with:** Human
Product overview	Avidity Toxoplasma gondii IgG ELISA kit (ab247202) is designed to indicate the Toxoplasma-specific IgG avidity in human serum or plasma (citrate, heparin) to differentiate between acute and past infection. The qualitative immunoenzymatic determination of specific antibodies is based on the ELISA (Enzyme-linked Immunosorbent Assay) technique. Microplates are coated with specific antigens to bind corresponding antibodies of the sample (dual pipetting). After washing the wells to remove all unbound sample material, one well is incubated with avidity reagent and the corresponding well with washing buffer. The avidity reagent removes the low-avidity antibodies from the antigens whereas the high-avidity ones are still bound to the specific antigens. After a second washing step to remove the rest of avidity reagent and low-avidity antibodies, a horseradish peroxidase (HRP) labelled conjugate is added. This conjugate binds to the captured antibodies. In a third washing step unbound conjugate is removed. The immune complex formed by the bound conjugate is visualized by adding Tetramethylbenzidine (TMB) substrate which gives a blue reaction product. The intensity of this product is proportional to the amount of specific antibodies in the sample. Sulphuric acid is added to stop the reaction. This produces a yellow endpoint colour. Absorbance at 450/620 nm is read using an ELISA microwell plate reader. The presence of IgG antibodies to Toxoplasma indicates the occurrence of the infection but does not distinguish between recent and past infection. Specific IgM antibodies are first detected approximately in ten days and peak at about four weeks post infection. They may persist for several months after acute infections. Based on the evidence that antibody avidity gradually increases after exposure to an immunogen, avidity of IgG antibodies can be used as a marker for distinguishing recent primary from long-term infections. Avidity describes the binding strength of a specific antibody to its antigen. Low-avidity IgG antibodies indicate a primary infection, whereas the presence of IgG antibodies with high avidity points to persistency or reactivation of infection.
Platform	Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions Store at +4°C. Please refer to protocols.

Components	Identifier	1 x 96 tests
20X Wash Buffer Concentrate		1 x 50ml
Avidity Reagent		1 x 15ml
Cover Foil		1 unit
IgG high Control		1 x 2ml
IgG low Control		1 x 2ml
IgG Sample Diluent		1 x 100ml
Stop Solution	red cap	1 x 15ml
TMB Substrate Solution	Yellow cap	1 x 15ml
Toxoplasma gondii anti-IgG Conjugate		1 x 20ml
Toxoplasma gondii Coated Microplate (IgG)		1 unit
Toxoplasma gondii IgG Standard A		1 x 2ml
Toxoplasma gondii IgG Standard B		1 x 2ml
Toxoplasma gondii IgG Standard C		1 x 2ml
Toxoplasma gondii IgG Standard D		1 x 2ml

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