

Hantavirus IgG ELISA kit ab247195

1 Image

Overview

Product name Hantavirus IgG ELISA kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
sample	24	0.45nM		3.61%
sample	24	1.333nM		6.41%
sample	24	1.264nM		4.78%

Inter-assay

Sample	n	Mean	SD	CV%
sample	12	0.45nM		3.61%
sample	12	1.333nM		6.41%
sample	12	1.264nM		4.78%

Sample type Serum, Hep Plasma, Cit plasma

Assay type Sandwich (qualitative)

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview Hantavirus IgG ELISA Kit (ab247195) is designed for the qualitative determination of IgG class antibodies against Hantavirus in human serum or plasma (citrate, heparin).

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. After washing the wells to remove all unbound sample material a horseradish peroxidase (HRP) labelled conjugate is added. This conjugate binds to the captured antibodies. In a second 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.

Notes

Hantaviruses are negative sense RNA viruses in the Bunyaviridae family. Humans may be infected with Hantaviruses through urine, saliva or contact with rodent waste products. Some Hantaviruses may lead to serious diseases in humans, such as hemorrhagic fever with renal syndrome (HFRS) and hantavirus pulmonary syndrome (HPS). Human infections of Hantaviruses have almost entirely been linked to human contact with rodent excrement, but recent human to human transmission has been reported with the Andes virus in South America. Hantavirus has an incubation time of two to four weeks in humans before symptoms of infection occur. The symptoms of HFRS can be split into five phases:

Febrile phase: Symptoms include fever, chills, sweaty palms, diarrhea, malaise, headaches, nausea, abdominal and back pain, respiratory problems such as the ones common in influenza virus infection, as well as gastro-intestinal problems. These symptoms normally occur for three to seven days and arise about two to three weeks after exposure.

Hypotensive phase: This occurs when the blood platelet levels drop and symptoms can lead to tachycardia and hypoxemia. This phase can last for 2 days.

Oliguric phase: This phase lasts for three to seven days and is characterized by the onset of renal failure and proteinuria occurs.

Diuretic phase: This is characterized by diuresis of three to six liters per day, which can last for a couple of days up to weeks.

Convalescent phase: This is normally when recovery occurs and symptoms begin to improve. Regions especially affected by HFRS include China, the Korean Peninsula, Russia (Hantaan, Puumala and Seoul viruses), and northern and western Europe (Puumala and Dobrava virus).

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions

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

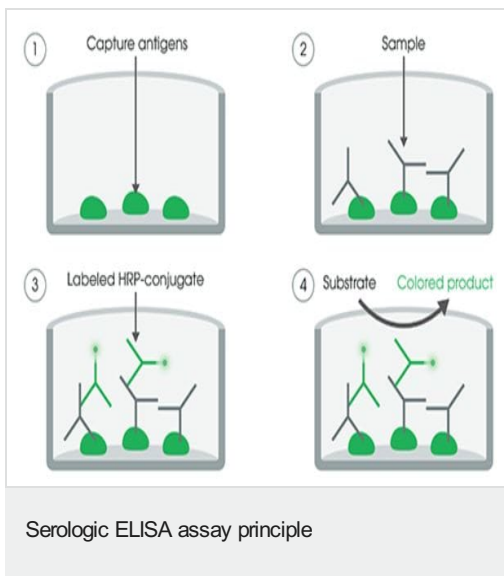
Components	Identifier	1 x 96 tests
20X Washing Solution	White cap	1 x 50ml
anti-human IgG HRP conjugate		1 x 20ml
Cover Foil		1 unit
Hantavirus Coated Microplate (IgG)		1 unit
IgG Cut-off Control		1 x 3ml
IgG Negative Control		1 x 2ml
IgG Positive Control		1 x 2ml
IgG Sample Diluent		1 x 100ml
Stop Solution	red cap	1 x 15ml

Components	Identifier	1 x 96 tests
TMB Substrate Solution	Yellow cap	1 x 15ml

Relevance

Hantavirus is a negative sense single stranded RNA virus of the family Bunyaviridae. Hantaviruses normally infect rodents such as mice and voles. In humans the virus causes two main patterns of disease: a bleeding disorder with low blood pressure and kidney failure (haemorrhagic fever with renal syndrome); and an illness with lung involvement and breathlessness, progressing to shock with high mortality (Hantavirus pulmonary syndrome). There are a number of strains of Hantavirus which vary in their distribution throughout the world, and also vary in terms of the severity of illness that they produce.

Images



Specific antigens are coated on the 96-well plate, controls or test samples are added to the well and incubated. The wells are washed to remove any unbound Human anti-antigen antibodies (Ig). A horseradish peroxidase (HRP) labelled anti-Human Ig conjugate is added to the wells. TMB is then catalyzed by the HRP to produce a blue color product that changes to yellow after adding an acidic stop solution. The intensity of yellow coloration is directly proportional to the amount of Human anti-antigen Ig captured on the plate.

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