abcam

Product datasheet

Legionella Pneumophila IgG ELISA kit ab247197

1 Image

Overview

Product name Legionella Pneumophila IgG ELISA kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
sample	24	0.275nM		9.88%
sample	24	0.474nM		7.96%
sample	24	1.722nM		5.05%

Inter-assay

Sample	n	Mean	SD	CV%
sample	12	22.35nM		9.56%
sample	12	62.64nM		7.2%
sample	12	1.88nM		14.3%

Sample type Serum, Hep Plasma, Cit plasma

Assay type Sandwich (qualitative)

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview *Legionella pneumophila* IgG ELISA kit (ab247197) is designed for the qualitative determination of IgG class antibodies against *Legionella pneumophila* 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.

Legionellae are aerobic gram-negative facultative intracellular parasites of certain protozoa. They are found in freshwater environments worldwide and can cause respiratory disease (legionellosis) in humans. *L. pneumophila* multiplies itself at temperatures between 25 and 42 °C, with an optimal growth temperature of 35 °C. *Legionella* thrives in warm, stagnant water in the environment and in artificial systems such as cooling towers, evaporative condensers, hot and cold water systems and spa pools that mimic the natural environment in which the organism thrives. These systems also provide the means by which aerosols/droplets are generated and the organism dispersed into the atmosphere.

Legionellosis can be acquired by the inhalation of aerosols containing Legionella bacteria or by micro-aspiration of ingested water contaminated with Legionella. Person-to-person transmission is not thought to be a risk.

Platform Microplate (12 x 8 well strips)

Properties

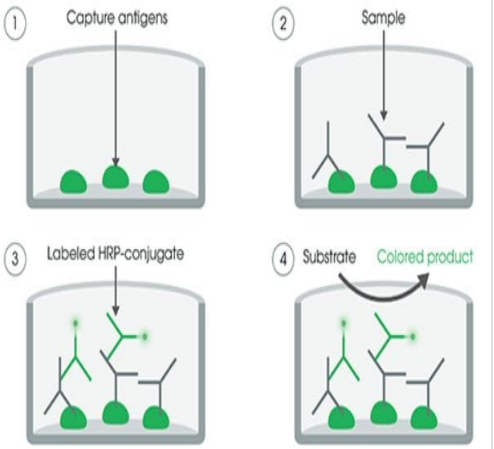
Storage instructions Store at +4°C. Please refer to protocols.

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
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
Legionella pneumophila Coated Microplate (IgG)		1 unit
Stop Solution	red cap	1 x 15ml
TMB Substrate Solution	Yellow cap	1 x 15ml

Relevance Legionella pneumophila is a flagellated gram negative bacterium found primarily in warm water environments. Legionella pneumophila causes a type of pneumonia called Legionnaire disease and a milder condition called Pontiac fever. Infection is acquired through inhalation of the microorganism in water mists (e.g. from air conditioning, cooling towers, whirlpool spas and showers mists). A number of risk factors for acquiring Legionnaire disease have been identified,

including age, smoking, chronic lung disease, cancer, and immunosuppression.

Images



Serologic ELISA assay principle

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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