



Bovine Respiratory Syncytial Virus ELISA KIT

For bovine serological samples or milks - double wells

BIO K 061/2 or BIO K 061/5

In Europe, BRSV is the most important etiological agent responsible for respiratory affections in young cattle. In cattle as in children, respiratory syncytial viruses can cause a very deep attack of the respiratory tree. The affection is often provoking very severe injuries, which are responsible for important economical losses. As a matter of fact, in Europe, 7 million calves suffer from infectious diseases yearly, 60 % of which are caused by respiratory pathogens. One million calves are dying each year of respiratory diseases in the European Community. The cost of these diseases which includes medical treatments, growth delays and mortality is about 450 millions EURO per year for calves under one year. For dairy cattle, the cost of BRSV has been evaluated at around 25 EURO per animal. BRSV is principally affecting young cattle. Beef cattle is especially vulnerable because of the muscular mass of the animal which is very important compared to the pulmonary volume. Clinical manifestations can be dramatic. Often signs of severe pneumonia such as polypnea, abdominal breathing and hyperthermia are present. Reinfections can be observed but most often they remain subclinical. Clinical diagnosis is very difficult and laboratory assistance is required for a precise diagnosis. Virus can be detected in lung tissue by fluorescein labelled specific antibodies. Diagnosis can also be achieved by measuring a virus specific seroconversion. To do so, a first sample will be collected during the acute phase of the disease and a second sample will be collected 2 or 3 weeks later. These two samples will be evaluated for their content in specific antibodies against BRSV by ELISA.

EIA Procedure

- 1- Microplate coated with monoclonal antibody and F recombinant protein from BRSV
- 2- Add samples and positive control. Incubate 1 hour at 21°C+/-3°C. Wash
- 3- Add conjugate. Incubate 1 hour at 21°C+/-3°C. Wash
- 4- Add Chromogen TMB. Wait 10 minutes. Add stop solution. Read at 450 nm



Use of the kit

The kit is designed to follow seroconversion on paired sera or milks

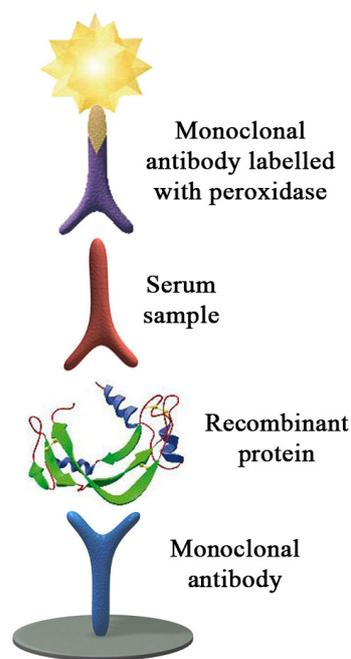
Reliable Results

The use of monoclonal antibody as conjugate ensures excellent specificity and very reliable results.

The use of monoclonal antibodies to purify the F recombinant protein on the plate also makes it possible to obtain an excellent specificity

Ease-of-Use

Minimal hands-on-time
Room temperature incubation
Results available in 140 minutes for single or batch testing



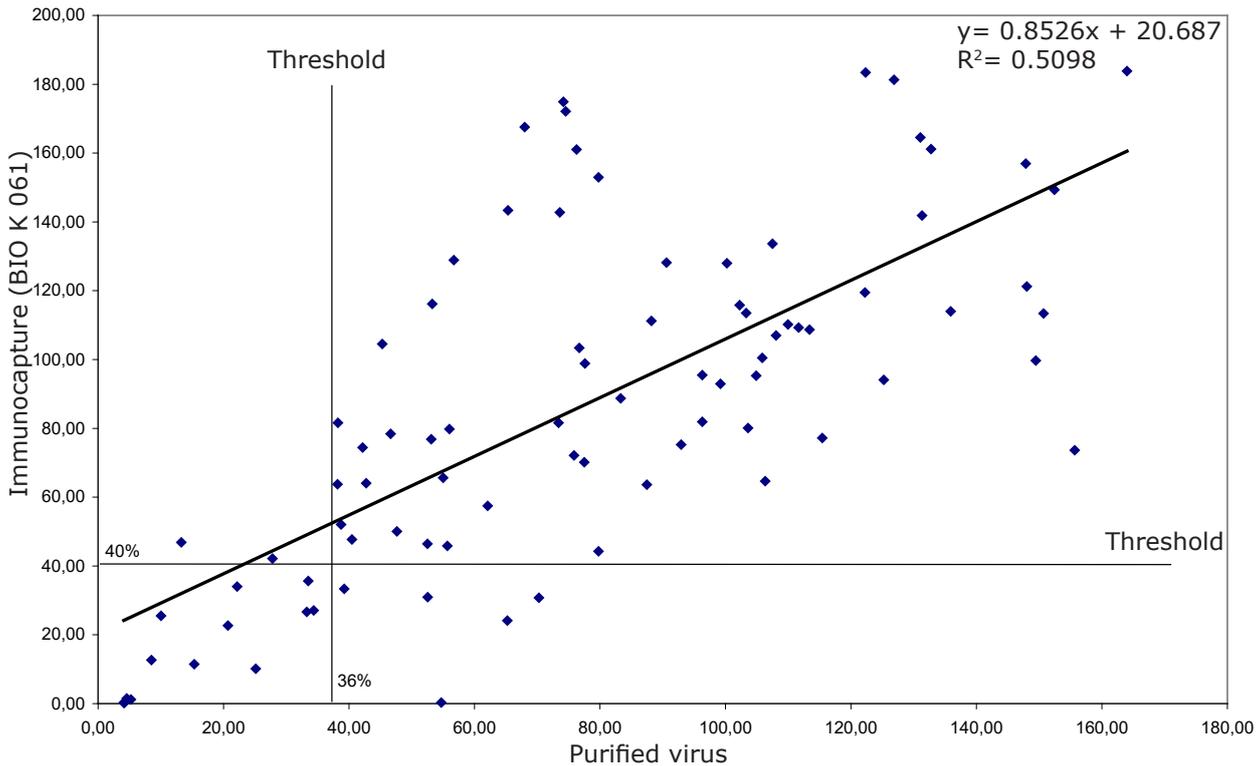


Kit performance

The performance of the BIO K 061 kit (immunocapture test) was compared with that of an ELISA indirect test using purified virus (in-house test) on 270 blood serum samples. The results of these comparisons are shown in Graph 1. On the abscissa, 100% corresponds to the value obtained with the kit's positive reference serum.

Graph n° 1

BRSV Purified virus - Immunocapture BIO K 061



Relative sensitivity: 93 %
Relative specificity: 87 %

Concordance between the two tests: Kappa = 0.74
The concordance between the two tests is considered good.
Landis et Koch, The measurement of observer agreement for categorical data
Biometrics 1977, 33, 159-74

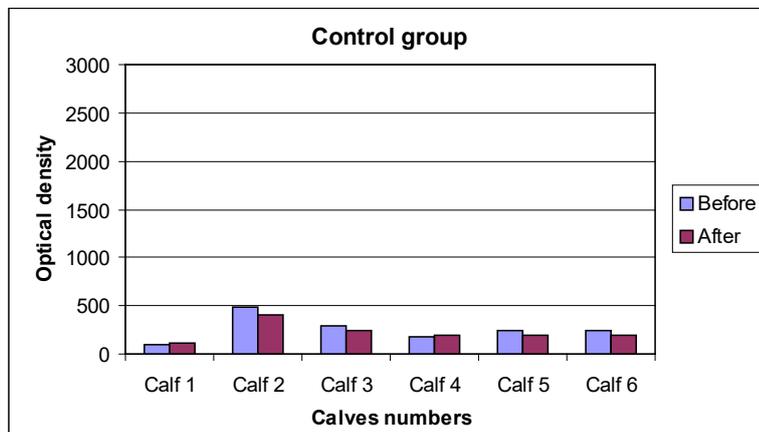
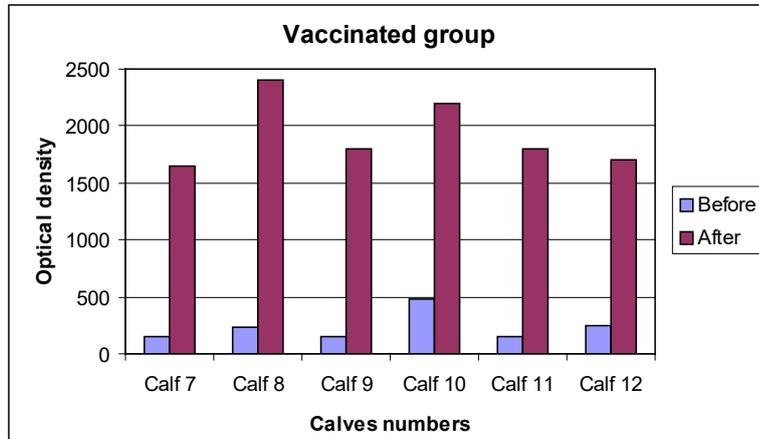




Example of results

A batch of 12 calves of approximately 8 months was divided into two groups. The first group was vaccinated with an inactivated commercial vaccine. The second group was not vaccinated. Before vaccination, the 12 calves were blood sampled. After the second vaccination, the 12 calves underwent a blood sampling. The paired sera were tested with the Bio K 061 kit of Bio-X Diagnostics.

Graph n° 2





Composition of the kit

BIO K 061 : BRSV ELISA KIT

	BIO K 061/2	BIO K 061/5
Microplates	2	5
Washing solution	1 x 100 ml (20x)	1 x 250 ml (20x)
Dilution buffer	1 x 50 ml (5x)	1 x 100 ml (5x)
Conjugate	1 x 0.5 ml (50x)	1 x 1.4 ml (50x)
Positive serum	1 x 0.5 ml (1x)	1 x 0.5 ml (1x)
Single Component TMB	1 x 25 ml (1x)	1 x 55 ml (1x)
Stopping solution	1 x 15 ml (1x)	1 x 30 ml (1x)

1 year of stability between +2°C and +8°C

