SVANOVIR® BCV-Ab

A test for measuring circulating Bovine Coronavirus in cattle

**SUMMARY** | SVANOVIR® BCV-Ab detects antibodies to Bovine Coronavirus in serum/plasma, and milk (individual and bulk milk) of infected cattle. The test has been successfully used in longitudinal field studies on virus dynamics and evaluation of management routines. Benefits to control programs include the test’s ability to detect changes in antibody levels by analysing paired samples and thereby identifying recent exposure to BCV.

**YOUR CHALLENGE** is a contagious respiratory virus

Bovine Coronavirus is involved in several disease syndromes that cause economic loss in livestock production, including various degrees of respiratory disease in all age classes, winter dysentery in adult cattle, and diarrhoea in calves. BCV may be the sole agent causing respiratory disease; however it can be also part of a mixed infection. The virus often makes cattle predisposed to secondary bacterial infections, which aggravate the initial clinical situation.

**YOUR GOAL** is to prevent BCV from infecting your herd

Clinical disease is most often apparent in previously non-exposed herds, in calves with diminishing maternal antibodies, and in immuno-compromised herds. Studies show that seroconversion is a matter of recurrent virus introduction rather than of virus reactivation in carrier animals. This fact stresses the importance of biosecurity measures. Accurate diagnostic tests are essential to prevent the shipment of infected animals to susceptible herds.

**ASSAY OVERVIEW**

SVANOVIR® BCV-Ab

<table>
<thead>
<tr>
<th>Species</th>
<th>Bovine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samples</td>
<td>Serum/plasma, milk (individual and bulk milk)</td>
</tr>
<tr>
<td>Type</td>
<td>Indirect ELISA detecting IgG1</td>
</tr>
</tbody>
</table>

**Highly specific** assay for detecting exposure of cattle to BCV

**Early detection of infection**

IgG1 can be detected by day 9-11 p.i.

**Efficient screening** where validation of bulk milk enables classification of herds into susceptible and exposed

**Work-effective** assay with quantitative single-dilution

**Developed in collaboration** with the Swedish Veterinary Institute

---

* Samples: Max. number of samples for analysis, wells for kit controls excluded.
SVANOVIR® BCV is a valuable tool for detecting BCV infections in cattle, and classifies herds into susceptible and exposed.

**PERFORMANCE CHARACTERISTICS**

**SVANOVIR® BCV-Ab**

In a study of 91 sera from Swedish cattle, the ELISA demonstrated high sensitivity and specificity when compared to a virus neutralisation test (Alenius et al., 1991). The assay detects differences in antibody levels which enables the detection of current exposure to BCV (Ohlson et al., 2010a).

SVANOVIR® BCV-Ab was successfully applied in a 3-year longitudinal study using bulk tank milk to investigate dynamics of virus spread (Ohlson et al., 2010a) and to identify risk factors for virus prevalence in Swedish dairy herds (Ohlson et al., 2012b).

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Reference method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum n=91*</td>
<td>84.6%</td>
<td>100%</td>
<td>VNT*</td>
</tr>
</tbody>
</table>

* Samples from Swedish cattle * Virus neutralisation test

**References**


**COMPLIMENTARY DIAGNOSTIC SOLUTIONS**

- **SVANOVIR®BRSV-Ab** Detecting antibodies specific to Bovine Respiratory Syncytial Virus
- **SVANOVIR®PIV3-Ab** Detecting antibodies specific to Bovine Parainfluenza Virus Type 3
- **SVANOVIR®IBR-Ab** Detecting antibodies specific to Bovine Herpesvirus 1