SVANOVIR® BLV gp51-Ab

The assay which is successful in control & eradication programmes worldwide

SUMMARY | SVANOVIR® BLV gp51-Ab is based on the gp51 envelope protein, enabling the detection of antibodies to BLV during early phase of infection. It fulfils the EU standard E05 (EEC directive 88/406/EEC) has repeatedly shown high sensitivity and specificity in serum and milk samples (individuals and pools) from field infected animals.

YOUR CHALLENGE is an inapparent disease

BLV causes enzootic bovine leukosis, a disease that is mainly prevalent in adult cattle. The infection can persist without apparent clinical signs but lead to reduction of yield. Only a few animals may develop fatal lymphosarcoma. Once an animal is infected, the virus remains present for life and may spread to susceptible animals through contact with contaminated blood e.g. during vaccination, ear tagging or dehorning.

YOUR GOAL is to accurately identify infected cattle

BLV is present in cattle worldwide, but prevalence varies between herds and regions. Control procedures include identifying positive herds, isolating and culling positive individuals, and retesting the remaining cattle. Timely identification of infected cattle prevents spread of disease and maintains production yield.

ASSAY OVERVIEW

SVANOVIR® BLV gp51-Ab

Species	Bovine
Samples	Serum/plasma, individuals and pools of ≤10 Milk, individuals and pools of ≤50
Type	Indirect ELISA based on the envelope glycoprotein gp-51

Article number	**Samples***	**Plates**	**Format**
10-2351-02[a]	88	2	Strips
10-2351-10[a]	440	10	Plates
10-2351-50[b]	920	10	Strips

* Samples: Max. number of samples for analysis, wells for kit controls excluded.
[a] Confirmation assay: recommended for herds with high prevalence.
[b] Screening assay: recommended for herds with low prevalence, in combination with confirmation assay.

Field-proven assay – used for the control of BLV in Scandinavia, Netherlands, Croatia, Canada and Australia

High analytical sensitivity, repeatedly proven in bulk tank milk and dilution studies

Fulfils detection of E05 in those dilutions stated in EU directive 88/406/EEC

Accurate results in proficiency tests organised by the OIE Reference Laboratory for Enzootic Bovine Leukosis in Poland, in 2011 and 2014

Prescribed test method for international trade by OIE

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SVANOVIR® BLV gp51-Ab is a well validated and field proven assay fulfilling all the requirements for monitoring BLV infection in cattle.

Efficient dual functionality in sample type – analysis of serum /plasma and milk samples are possible in the same assay

Standard formats for low throughput and large scale testing

Fast feedback to customer – first results in less than 2.5 hrs

High quality - thoroughly validated and manufactured under strict ISO 9001:2008 standardised procedures in Sweden

Multilingual kit insert and labels

YOUR SUPPORT

From 9am-16pm CET call:

+46 18 65 49 15

customer.service@svanova.com

PERFORMANCE CHARACTERISTICS
SVANOVIR® BLV gp51-Ab

The performance of the SVANOVIR® BLV gp51-Ab has been evaluated in several external and internal studies and has unanimously received best assessments. During several years of Proficiency testing organized by the OIE Reference National Laboratory for Enzootic Bovine Leukosis, Pulawy, Poland the SVANOVIR® BLV gp51-Ab has achieved results fully matching those expected by the laboratory (Kuzmak, 2011-2014).

Excellent sensitivity and specificity were seen in serum and milk samples (individuals and pools) from field infected animals when compared to immuno-diffusion test (AGID) (Table , Klintevall *et al.*, 1991).

The analytical sensitivity of SVANOVIR® BLV gp51-Ab was superior to all other assays and was the only assay that provided a positive result for E4 serum after a dilution up to 640 times (Kramps, 1994). Titration of the E05 in negative serum showed that SVANOVIR® BLV gp51-Ab revealed a positive result at a dilution of 1/16 384 (Jalali, 2010). In another dilution trial including 10 negative and 40 strongly positive samples, the SVANOVIR® BLV gp51-Ab was detecting antibodies in samples diluted up to 1/20 800 (Simard *et al.*, 2000). Studies from bulk tank milk analyses suggest accurate results of tank milk samples containing milk from at least 50-100 animals and detecting a herd as positive with a prevalence of as low as 4% (Klintevall *et al.*, 1991).

Table: Overview of performance characteristics of SVANOVIR® BLV gp51-Ab in sera compared to immuno-diffusion test (AGID).

Specimen	Sensitivity	Specificity	Reference method	Reference
Serum[a] N=414/n_{pos} =214	100%	99.8%	AGID	Klintevall *et al.*, 1991
Serum[b] N= 1200/n_{pos}= 490	99.0%*	99.6%	AGID	Simard *et al.*, 2000
Serum[c] N=45/n_{pos}=16	100%	100%	Experimentally infected; field sera: AGID	Kramps, 1994
Agreement milk *vs.* serum[a] N=414/ n_{pos} =214	100%	99.4%	Not applicable	Klintevall, 1991

Samples from [a] Sweden, [b] Canada, [c] Netherlands * Both false negatives found in the first run were positive after retesting.

More information about the assay and the validation studies is provided in the "Performance Review" document.

PIBLV/03

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References

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