SVANOVIR® *A. suum*-Ab

The first screening tool to measure *Ascaris suum* in fattening units

SUMMARY | The SVANOVIR® *A. suum*-Ab is an indirect ELISA based on the haemoglobin of the parasite thereby enabling the detection of antibodies to the both larval and adult stages. In comparison to classical diagnostic tests (faecal egg counts and liver white spots) the assay has an unprecedented high sensitivity and specificity.

YOUR CHALLENGE is a subclinical disease resulting in production loss

Pigs are infected when they take up infective parasite eggs that are present in the environment. Not only the presence of adults, but also the migration of the larval stages of this parasite have been shown to pose a significant challenge to the health and growth rate of pigs. In current high intensity pig farming, herd-level prevalence of *Ascaris suum (A. suum)* has been demonstrated to range from 40-70%.

YOUR GOAL is to identify pig units in which significant infection levels are present

The goal of control is to reduce the number of eggs in the environment by sanitary measures and by repeated anthelmintic treatment of pigs to prevent the production of new eggs. Classical tests (faecal egg counts and liver white spots) have limitations in quantifying the levels of exposure of the pigs to *A. suum*. High reactivity of serum samples in the ELISA indicates a significant exposure and provide guidance in the control of *A. suum* infection.

ASSAY OVERVIEW

SVANOVIR® *A. suum*-Ab

Species	Porcine		
Samples	Serum		
Type	Indirect ELISA based on *Ascaris suum* haemoglobin		
Article number	**Samples***	**Plates**	**Format**
115842	184	2	Strips

*Samples: Max number of samples for analysis, wells for kit controls excluded.

Pioneer assay for sero-monitoring of *Ascaris suum* infections in fattening pig units

Validated for determining the infection level in the fattening units

Effective screening tool that enables continuous monitoring of the effectiveness of control strategies

Thoroughly **validated in experimentally and naturally infected pig populations**

Developed in collaboration with the Department of Virology, Parasitology and Immunology at **Ghent University,** Belgium.

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SVANOVIR® *A. suum*-Ab is a well validated antibody ELISA for semi-quantitative analysis of exposure to *A. suum*. The assay clearly sets a new standard for the control of *A. suum* infection in fattening pig units.

Effective handling with ready-to-use conjugate and strip format

High quality - thoroughly validated and manufactured under strict ISO 9001:2015 standardised procedures in Sweden

YOUR SUPPORT

From 9am-4pm CET call:

+46 18 65 49 15

customer.service@svanova.com

PERFORMANCE CHARACTERISTICS

SVANOVIR® A.suum-Ab

A. suum-Ab ELISA has been proven a valuable tool to assess the exposure levels to *A. suum* since a serological test is a more practical and accurate alternative to standard test methods. In studies of experimentally and naturally infected pig populations (Vlaminck, *et al*, 2012) the test showed to have high diagnostic sensitivity for *A. suum* exposure in fattening pigs compared to the classical tests (faecal egg counts and liver white spots).

In another field study, using *A. suum*-Ab ELISA on samples from 20 Belgian and 20 German fattening pig units (Vlamink, *et al,* 2015), the test results showed a significant positive correlation between *Ascaris* serology and higher percentage of affected livers. In the same study it was also confirmed that *Ascaris* exposure leads to gain loss for pigs. *Ascaris* serology was negatively correlated with average daily gain ρ=-0.69 in Belgian farms. These results further support other studies indicating that *A. suum* infections have a significant impact on farm productivity and that an effective control of parasite exposure will have economic benefit for pig farms.

SVANOVIR® *A. suum*-Ab has been developed on the same key components as published by Vlaminck, *et al*, 2012 and 2015. It was thoroughly validated on samples from 25 European indoor pig fattening farms as well as experimentally infected animals. In a ring trial, 243 serum samples were sent to four different laboratories and the results show very strong linear correlation among the test results from these laboratories with a correlation coefficient between 0.95 to 0.99. Test results from experimentally infected animals (n=30) showed 100% sensitivity and 100% specificity 7 weeks post infection.

Mean ODR for 10 representative samples	Interpretation
< 0.4	No or low exposure to *A. suum*
0.4- 0.6	Possibly exposed to *A. suum*, but limited impact expected
> 0.6	Exposed to *A. suum*, significant impact expected

PIAsc/03

Boehringer Ingelheim Svanova
Box 1545
SE-751 45 Uppsala, Sweden

www.svanova.com

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Reference

1. Vlaminck J., Nejsum P., Van Groenweghe F., Thamsborg S.M., Vercruysse J., Geldhof P. Evaluation of a serodiagnostic test using *Ascaris suum* haemoglobin for the detection of roundworm infection in pig populations. Veterinary Parasitology 2012 189(2-4):267-73.

2. Vlaminck J.,Düsseldorf S., Heres L., Geldhof P. Serological examination of fattening pigs reveals associations between Ascaris suum, lung pathogens and technical performance parameters. Veterinary Parasitology 2015 210(3-4):151-8