

“EVALUATION OF DIFFERENT COMMERCIALLY AVAILABLE ELISAS FOR SEROLOGICAL ANALYSIS OF AUJESZKY’S DISEASE IN SERUM SAMPLES FROM WILD BOARS”

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INTRODUCTION

The aim of this study is to evaluate the use of CIVTEST® SUIS ADV, CIVTEST® SUIS ADVgE, CIVTEST® SUIS ADVgB and two other commercially available competition ELISAs to detect antibodies against Aujeszky’s disease virus (ADV) in serum samples from wild boars corresponding to different epidemiological situations.

MATERIALS AND METHODS

The study was conducted on 74 serum samples from wild boars corresponding to different epidemiological situations (see Table 1) which were collected between 2004 and 2010. VassarStats shareware were used for the statistical analysis.

Table 1. Classification of the samples used in the study, as per analyses performed between 2004 and 2010 (SaBio).

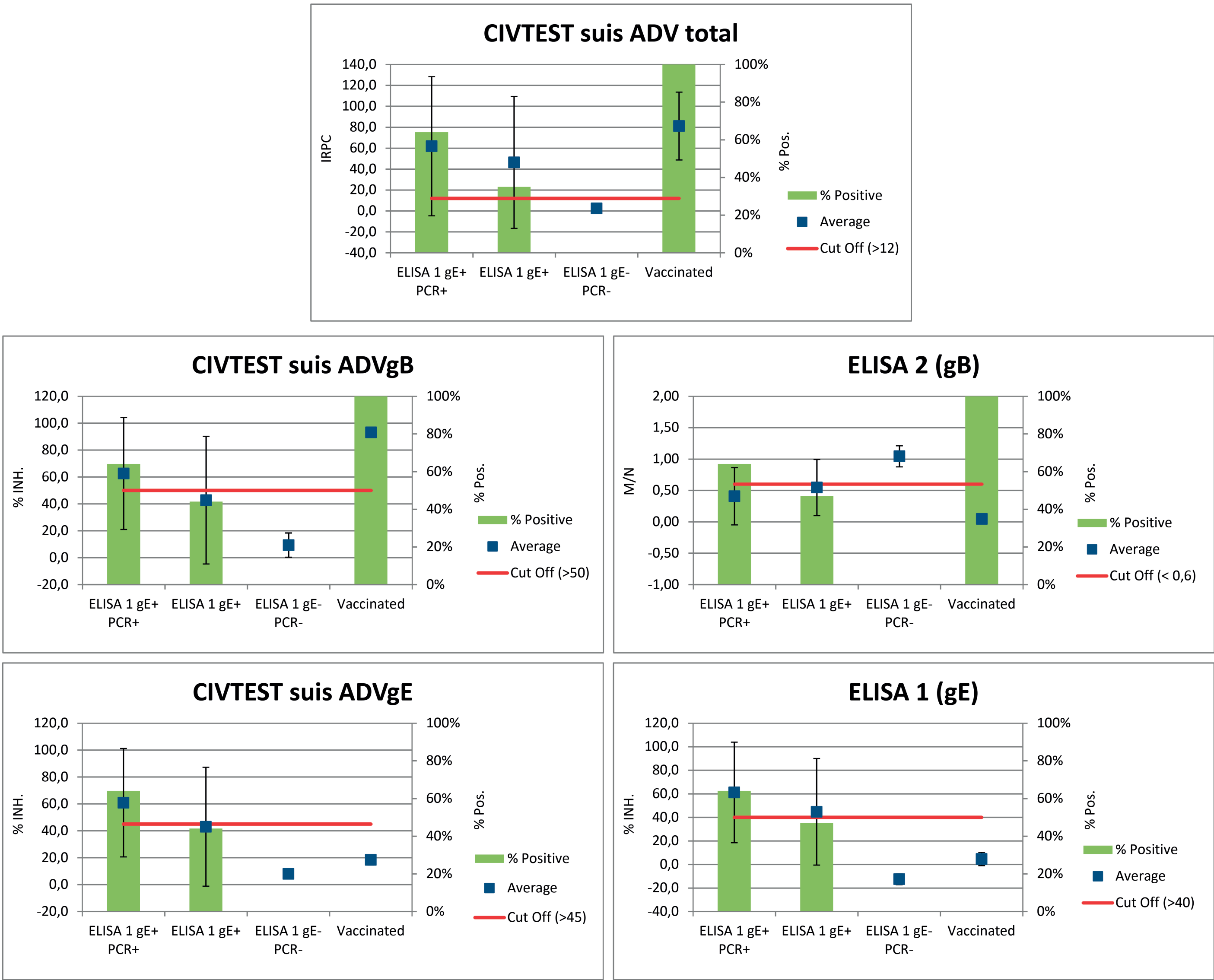
Group	No. animals	Epidemiological situation
1	14	PCR+ / ELISA-X ₁ gE+
2	34	ELISA-X ₁ gE+
3	11	PCR- / ELISA-X ₂ gE-
4	15	Vaccinated with a deleted vaccine

CIVTEST® SUIS ADV, CIVTEST® SUIS ADVgE, CIVTEST® SUIS ADVgB and two commercially available competition ELISA kits against the ADV gE (ELISA-X₁) and gB (ELISA-X₂) glycoprotein were used to analyse the samples.

RESULTS

The results obtained in each of the ELISAs and for each group of samples are shown in Figure 1.

Figure 1. Each panel summarizes the results from each of the kits used. The left vertical axis shows the quantitative results; average values (square) are shown as well as the standard deviation (vertical lines) obtained in each group. The right vertical axis shows the qualitative results (bar chart) as a percentage of positive results for each group. The red horizontal line indicates, in each case, the positive cut-off point for each of the kits.



DISCUSSION AND CONCLUSIONS

The results in groups 3 and 4 are those expected according to their epidemiological situation.

The percentage of positive animals in group 1 is 64% in all ELISAs. In group 2 this percentage ranges between 35% and 47%, according to the ELISA used.

In all groups analysed, the CIVTEST® SUIS ADV yielded results for sensitivity and specificity comparable to the CIVTEST® SUIS ADV gB and ELISA-X₂. The high kappa value found between CIVTEST® SUIS ADV and the two ELISAs against glycoprotein gB, indicate the similar diagnostic features of these three ELISAs. This data indicates that this kit presents a conjugate with a suitable level of cross-reaction with wild boar antibodies to enable its use in serological studies in wildlife.

The high kappa values found in this study indicate that the diagnostic features of these kits are virtually identical. They were both demonstrated to be, in each case, equally suitable for use in serological studies on samples from wild boar.

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