Evaluation of classical swine fever virus antibody detection assays with an emphasis on the differentiation of infected from vaccinated animals

The aim of this study was to evaluate the general characteristics of commercially available enzyme-linked immunosorbent assays (ELISAs) to detect antibody against classical swine fever (CSF), as well as to assess their potential use as accompanying marker tests able to differentiate infected from vaccinated animals (DIVA).

The Chekit\textsuperscript{*} CSF-Sero and the HerdChek\textsuperscript{*} CSFV Ab, both of which detect antibodies against the E2 protein of classical swine fever virus (CSFV), had the highest sensitivity. Both tests were practicable and showed good reproducibility. Comparable sensitivity was shown by the Chekit\textsuperscript{*} CSF-Marker, an Erns ELISA. However, this test does not allow differentiation between antibodies directed against ruminant pestiviruses and those against CSFV. Therefore, it is not suitable for use with the chimeric marker vaccines tested.

The PrioCHECK\textregistered CSFV Erns was the only ELISA suitable for use in DIVA with marker vaccines containing Erns proteins from ruminant pestiviruses. However, this test was less sensitive and selective than the E2-ELISAs and cannot be recommended.

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