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Evaluation of commercial ELISA kits for detection of antibodies against bovine atypical pestivirus

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A group of emerging bovine pestiviruses becomes a possible threat to Bovine Viral diarrhea virus (BVDV) control and eradication programs in the countries of their origin and in the new continents due to the lack of validated detection methods. The use of ELISA kits may be acheaper, time saving and less laborious option allowing screening for antibodies in large populations. Since test specific for emerging and new BVDV strains are still under preparation, the purpose of this work was to evaluate available BVDV antibody ELISA assays for their ability to detect antibodies against Hobi-like viruses. Analysis of a panel of sera obtained from calves experimentally inoculated with Hobi-like virus (isolated from a calf from Thailand) and BVDV type 1 strain using five different ELISA kits in comparison to neutralization test was performed. The specificity and sensitivity of the tests depended greatly on the level of antibodies with some tests enabling detection of specific antibodies against atypical pestivirus a week earlier than with other assays. Despite significant antigenic differences between atypical pestivirus and BVDV-1, the use of some tests may be recommended while no specific methods are available.

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