Applying of Antigen JTat Recombinant on Jembrana Disease Detection: Early Approval

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ABSTRACT

Jembrana Disease (JD) is the most case in Bali cattle with mortality up to 20%. Currently the JD occur can't be detected clinically therefore needs to conduct early detection and monitor antibody titer to predict the precise time of JD vaccination. The aim of this research was to apply JTAT recombinant antigen in detection of the JD of Bali cattle. Amount of 36 serum samples of Bali cattle was applied this research (34 originated from Marabahan regency of South Kalimantan; 1 positive control; 1 negative control). Two ELISA microplate types of medium binding (MB) and high binding (HB) were used and each coated with recombinant JTAT Antigen in ratio of 1:400. Dilution of each serum sample was 1:100, positive control serum was diluted in 1:100; 1:200 and 1:400 while negative control was in 1:100 and 1:200. Each serum sample was prepared in duplicate of each type of microplate binding. Titer of Antibody was read at OD405nm. The result showed that in average the titer of antibody was higher read in HB ELISA compared to that in MB ELISA microplates in all samples and both of positive and negative controls. By using HG ELISA microplate, three out of 34 samples were detected higher antibody titer in sample #8 (1,9075), #14 (2,0145); # 20 (1,8195) based on positive control of 1:400 dilution (1,0760) while by MB ELISA microplate on positive control of 1:400 (0,3855) could only detect 2 serum samples of sample sample #14 (0,8020) and # 20 (0,7615). Based on this study, the JTAT recombinant antigen could detect JD titer of Bali cattle in serum dilution of 1:100 and positive control in dilution of 1:400. This finding suggests that further study needs to check validation, sensitivity and specificity of the JTAT recombinant antigen compared to the existing of antigen Jembrana.

Keywords: Recombinant antigen, JTAT, Bali cattle, Jembrana disease