ABSTRACT

RISMA ADELIA. Optimization IgY and IgG as Capture and Detection Antibody of Fasciola gigantica Excretory Secretory (ES) Antigen in ELISA Assay. Under direction of FADJAR SATRIJA and SRI MURTINI.

Fasciolosis is a parasitic disease of domestic ruminant that cause high economic loss. Currently diagnosis of fasciolosis relies on microscopic examination of Fasciola sp. eggs in fecal sample. Serological test such as ELISA has been developed to improve the diagnostic method of fasciolosis. This study was designed to optimize the use of polyclonal antibodies (IgY and IgG) as capture antibody and detection antibody in ELISA assay to detect excretory secretory (ES) of Fasciola gigantica. The conformation was done in two models which compared IgY (9.57 mg/ml) and IgG (3.75 mg/ml) as capture antibody in 1:1000 dilution and IgG as detection antibody in 1:100, 1:1000, and 1:10000 dilutions. The other conformation was IgG as capture antibody in 1:1000 dilution and IgY as detection antibody in 1:100, 1:1000, and 1:10000 dilutions. The results showed that IgY as capture antibody in 1:1000 dilution and IgG as detection antibody in 1:100, 1:1000, and 1:10000 dilutions were able to capture ES antigen 3.87; 2.85; and 1.65 times than cut off value. The other conformation with IgG as capture antibody in 1:1000 dilution was able to capture ES antigen as much as 1.91 times than cut off value with IgY as detection antibody in 1:100 dilution. This showed that the good optimization ELISA was IgY as capture antibody in 1:1000 dilution and IgG as detection antibody in 1:100 dilution.

Key words: ELISA, Fasciola gigantica, Immunoglobulin Y, Immunoglobulin G