

Identification of antigenic proteins of *Setaria labiatopapillosa* in cattle (*Bos taurus*)

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Abstract

Setaria labiatopapillosa is one of the parasitic nematodes found in bovines, which causes verminous encephalitis in non-specific hosts. This study aimed to determine the protein and antigenic profiles of *S. labiatopapillosa* in cattle using immunoblotting. The samples were taken from cattle at Ahvaz slaughterhouse. Somatic crude extracts of adult and microfilariae of the nematode (as S and MF proteins or antigens) were prepared separately by homogenization. Excretory secretory products (ES) were prepared by incubating the adult nematode in RPMI medium. Protein profiles and antigenic properties of ES, S, and MF samples of *S. labiatopapillosa* were determined by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE). Immunogenic properties of the proteins were determined using immunoblotting and positive sera from cattle infected with the adult nematode. More than two, 8, and 15 predominant protein bands at 200 to 22 kDa were demonstrated in SDS-PAGE gels of ES, MF, and S samples. Consequently, in immunoblotting of ES, MF, and S, two, 14, and 4 predominant ES antigenic bands were demonstrated; among them, the 68- and 64-kDa proteins were the most common antigenic components. The results of immunoblotting of ES, MF, and S of *S. labiatopapillosa* showed that the 68- and 64-kDa proteins were the most common antigenic components, and can be potential candidates for future studies.

Key words: Antigens, Bovine, Immunoblotting, *Setaria labiatopapillosa*,

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