

ABSTRACT

**THE EXPRESSION OF 41.5 kDa PROTEIN ANTIBODY IN
LYMPHOCYTE CELL OF MICE BALB/C AFTER INDUCTION
OF 41.5 kDa HUMAN SPERMATOOZOA PROTEIN FOR
MONOCLONAL ANTIBODY PRODUCTION
(The Development of Male Fertility Detection Kit Immunodiagnostic
Products)**

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This male fertility detection test uses the immunodiagnostic principle in which defined as a diagnostic test using markers based on antigen-antibody reactions. Monoclonal antibodies are homogeneous, have high specificity and can be produced continuously. According to the developmet of ethanolic extract of *Justicia gendarussa* Burm.f as a male oral contraceptive drug, it is known that human spermatozoa protein with molecular weight of 38 kDa and 41.5 kDa play an important role in sperm fertility. Human spermatozoa protein with molecular weight of 41.5 kDa has been known to have a function as glycoprotein and hyaluronidase enzyme. The objective of this study was to discover the immunogenic properties of 41.5 kDa protein isolated from spermatozoa membrane using SDS-PAGE method, confirmed by performing specificity and sensitivity test of 41.5 kDa protein antibody using ELISA and western blot methods and to discover the ability of mice's lymphocyte cell to express 41.5 kDa protein antibody before performing the cell fusion stage with myeloma cell using immunocytochemistry method. The results showed that the highest antibody titer was on the fourth bleeding with absorbance value of 0.522 and 0.523. It indicated that the induction result of human spermatozoa protein with molecular weight of 41,5 kDa had immunogenic properties and specific to 41,5 kDa protein and mice's lymphocyte cell had the ability to express antibody showed by the highest expression on 4th week with immunoration of $94, 900 \pm 3,174$.

Furthermore, lymphocyte can be used in the stage of monoclonal antibody formation and thus, further research on the formation of monoclonal antibody is needed to develop immunodiagnostic detector for male fertility.

Key words : *Antibody monoclonal, 41.5 kDa protein, ELISA, Western Blot, Immunoytochemistry*