Molecular Analysis of scFv Immunoglobulin M Encoding Gene in Vaccinated Mice with Inactivated Multivalent Dengue Vaccine as Diagnostic Prototype

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ABSTRACT

This research is carried outto analyze the nucleotide, amino acid molecules and the paratope structure of encoding gene scFv which is part of the heavy chain variable (V_H) and light chain variable (V_L) immunoglobulin M from mice's spleen after vaccination with inactivated multivalent dengue as a diagnostic prototype. Mice were divided into two groups. In control group (KK), mice were injected with PBS and in treatment group (KP), mice were injected with inactived multivalent dengue vaccine. Spleen was preparedby flushing to collect B cell. RT-PCR and PCR is carried out to get DNA target encoding gene scFv IgM. The result of this research, nucleotide sequences of MHV, KK and KP has similarities reach to 98%. Light chain IgM (MHV), KK has similarities reach to 98%, meanwhile KP reach to 97%. Amino acids of MHV, KK has suitability as high to 97% and KP as hight to 94%. MLV, KK has suitability as high to 97% and KP as high to 99%. There are a change in the nucleotide and amino acid sequences, both in the MHV and MLV. Analyze of paratope from control group has 5 ABR and from treatment group has 6 ABR.

Key words : Coding Gene, scFv Immunoglobulin M, dengue vaccine, Diagnostic