

HUMORAL IMMUNE RESPONSES TO *PLASMODIUM VIVAX* SUBTELOMERIC TRANSMEMBRANE PROTEINS IN THAILAND

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Abstract. *Plasmodium vivax* subtelomeric transmembrane protein (PvSTP) is a homolog of *P. falciparum* SURFIN_{4.2'}, a protein exposed on the parasite-infected erythrocyte (iE) surface, and is thus considered to be exposed on *P. vivax*-iE. Because antibodies targeting antigens located on the surface of *P. falciparum*-iE, such as *P. falciparum* erythrocyte membrane protein 1, play an important role in regulating the course of disease, we evaluated the presence of antibodies in *P. vivax*-infected patients against two PvSTP paralogs, PvSTP1 and PvSTP2. Recombinant proteins corresponding to cysteine-rich domain (CRD) of the PvSTP extracellular region and the cytoplasmic region (CYT) were generated and used for the enzyme-linked immunosorbent assay. Plasma samples ($n = 70$) reacted positively with recombinant PvSTP1-CRD (40%), PvSTP1-CYT (31%), PvSTP2-CRD (27%), and PvSTP2-CYT (56%), suggesting that PvSTP1 and -2 are naturally immunogenic. Specific response against either PvSTP1 or PvSTP2 indicates the existence of specific antibodies for either PvSTP1 or -2.

Keywords: *P. vivax*, PvSTP, ELISA, antibody response

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