CHAPTER V

CONCLUSION

In vivo platelet activation is essential in hemostasis and thrombus formation. Indeed, inappropriate platelet activation is common in a variety of clinical diseases including diabetes mellitus, thalassemia and malignancies. Blood test reflecting *in vivo* platelet activation is therefore potentially useful in evaluating patients with thrombotic diseases. Flow cytometry represents a very valuable tool in the evaluation of platelet activation using monoclonal antibody (mAb) against surface activated platelet marker. Therefore, the aim of this study is to produce and characterize the monoclonal antibodies to membrane molecules on thrombin-activated platelets. In the present study, we produced three hybridomas secreting monoclonal antibodies to membrane molecules on thrombin-activated platelets and named 138.7, 176.7 and 297.7. All of generated mAbs are IgG1 isotype with kappa light chain. The mAbs clone 138.7 and 176.7 showed positive reactivity with activated platelets only, whereas, mAb 297.7 showed positive reactivity with both resting and activated platelets. Furthermore, all of the generated monoclonal antibodies showed an inhibitory effect on platelet aggregation. From these results, we conclude that our monoclonal antibodies, clone 138.7 and 176.7, that specific to activated platelets may be useful in evaluating the patients with thrombotic diseases and might offer advantages in the clinical management and prevention of patients at risk for thrombosis.