

Study on Fibroblast Activation Protein-a Activity in an *In Vivo* Mouse Model of Ehrlich Ascites Carcinoma

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Fibroblast activation protein-a (FAP-a) is a membrane-associated serine type post-proline cleaving protease with a very restricted normal tissues distribution but highly active in tumor tissues. In human breast cancer, FAP-a is expressed both in the reactive stromal fibroblasts and tumor cells. However, the enzyme role in pathogenesis of the breast cancer is unknown and its association with the prognosis is controversial varying from better to very poor. Animal models could help in elucidating the enzyme involvement in mammary gland carcinoma. In this study we present our results for FAP-a imaging in normal mouse mammary gland and in a murine *in vivo* model of Ehrlich ascites carcinoma (EAC) using a fluorogenic enzyme histochemical method recently developed by us. We show that FAP-a is not expressed in normal mouse mammary gland but is highly active in EAC cells. This result proves that mouse *in vivo* EAC model can be useful in studies of FAP-a diagnostic/prognostic value for human breast cancer.

Key words: fibroblast activation protein-a, Ehrlich ascites carcinoma, *in vivo* model, mouse, enzyme cytochemistry.