

Thesis Title	The Verification of Antigenic Specificity to the Established OVS ₁ and OVS ₂ Monoclonal Antibodies.
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Abstract

Established OVS₁ and OVS₂ monoclonal antibodies (MAbs) raised against human ovarian mucinous cystadenocarcinoma, could detect specific antigen, namely SA-1. The antigen was extracted from fresh endometrioid type of human ovarian tumour by sonication. SDS-PAGE and Western blot analysis showed that the SA-1 antigen of 29 kD, containing two polypeptide subunits of 13 and 20 kD, each of which reacted specifically with the OVS₁ and OVS₂ MAbs.

In this study, we determined the SA-1 levels in sera by double-determinant ELISA technique, using OVS₁, OVS₂-biotin conjugate MAbs and SA-1 antigen as the standard antigen. 154 serum samples, including of 64 healthy individuals, 25 non-malignant diseases, 14 other cancers and 51 ovarian cancer were assayed for SA-1 levels. At 220 ug/ml cutoff level (means + 1S.D.), the SA-1 levels were increased 19%, 28%, 21% and 63% in each group respectively. The antigen level in ovarian cancer group was significantly higher than other groups ($p < 0.05$). According to the histological type of ovarian cancer, the positive values were observed

in 75% and 55% of patients with mucinous type and non-mucinous type of ovarian cancer, respectively. Simultaneous determinations of CA 125 levels in sera of these groups were compared. Positive values of more than 35 units/ml cutoff level were 27, 40, 36 and 65% in healthy subjects, non-malignant diseases, other cancer and ovarian cancer, respectively. On contrary, the positive CA 125 values were 50% in mucinous type whereas, 74% in non-mucinous type. When we combined the two tests together, the sensitivity in ovarian cancer was increased to 86% with 52% specificity. We concluded that SA-1 antigen might be a useful tumour marker in serum diagnosis of ovarian cancer.