

CA 125 IRMA

Catalog #: DE4438

Immunoradiometric assay kit for the in vitro quantitative determination of the cancer associated antigen CA 125 in serum

Technology	: IRMA
Kit size	: 96 tests
Sample material	: serum
Sample preparation	: -
Sample volume	: 100 µl
Standard range	: 4.8 - 786 U/ml
Incubation	: 3 h RT (shaking)
Measuring system	: I-125
Sensitivity	: 0.7 U/ml

Special remarks:

CLINICAL BACKGROUND

Biological activities

CA 125 is a high molecular weight mucin type glycoprotein, originally defined by the Oc 125 monoclonal antibody (Mab) established by Bast et al. Different epitopes, co-expressed with the Oc 125 epitope on the CA 125 antigen, have been used for the development of heterologous assays for determination of the CA 125 antigen.

Clinical applications

Approximately 90% of ovarian cancers are celomic epithelial carcinomas and contain a celomic epithelium-related glycoprotein designated CA 125. CA 125 can be localized in most serous, endometrioid, and clear cell ovarian carcinomas; mucinous tumors express this antigen less frequently. CA 125 is also found in the epithelium of the fallopian tubes, endometrium, and uterine cervix. Elevated CA 125 levels can result from abdominal diseases other than ovarian cancer. Although CA 125 is most consistently elevated in patients with epithelial ovarian cancer, it can be expressed in a number of gynaecologic (eg, endometrium, fallopian tube) and non-gynaecologic (eg, pancreas, breast, colon, lung) cancers. CA 125 levels are frequently elevated with tumor spread beyond the uterus.

PRINCIPLES OF THE METHOD

The CA 125-IRMA is a two-step immunoradiometric assay based on coated-tube separation. Mab1, the capture antibody, is attached to the lower and inner surface of the plastic tube. Add calibrators or samples to the tubes. After incubation, washing removes the occasional excess of antigen. Addition of Mab2, the signal antibody labelled with ^{125}I , will complete the system and trigger the immunological reaction. After washing, the remaining radioactivity bound to the tube reflects the antigen concentration.

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