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CLINICAL UTILITY OF SCC ANTIGEN IN SQUAMOUS CELL CARCINOMA OF THE HEAD & NECK AND ESOPHAGUS. T.Yanagi,N.Hirose,Y.Yanagawa, I.Ikeda,A.Myoga and K.Kurata. Dainabot Co. Ltd.,Matsudo,Chiba,Japan.

Squamous cell carcinoma related antigen (SCC Ag.) was a subfraction of TA-4, which was described in 1977 by Kato,H. et al. We already reported a development of radioimmunoassay for SCC Ag. and clinical utility in patients with squamous cell carcinoma of the uterine cervix and lung.

Recently, clinical significance of this antigen in patients with squamous cell carcinoma of the head & neck and esophagus is shown by many clinical sites. We present these clinical data here.

Using 2.0ng/ml as a cut off value, (1)60%(n=163)of head & neck squamous cell carcinoma patients and 17%(n=82)of head & neck benign disease patients show positive. (2)Serial determination of SCC Ag. is useful for monitoring in head & neck squamous cell carcinoma. (3)Forty-four percent (n=122)of esophageal cancer patients show positive. (4)Seventy-nine percent(n=57) and 82%(n=17)of recurrent squamous cell carcinoma of the head & neck and esophagus, respectively.

SCC Ag. is a new marker of head & neck and esophagus region, for which there had been no useful marker previously. SCC Ag. is useful to diagnose the extent or prognosis of disease and effectiveness of treatments, and to detect recurrence of these cancers.

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EVALUATION OF AMERWELL CEA AND AMERWELL AFP USING MONOCLONAL ANTIBODIES. K. Miura, T. Hoda, T. Kumagai, M. Ino, Amersham Medical Ltd., Tokyo.

Amersham International plc have developed new IRMA kits for measuring CEA and AFP. 12 coated wells make up a strip and a micro titre plate holder is set with 8 strips. Each well can be separated according to the assay volume. This assay design gives customers more convenient and less radioactive waste. Monoclonal antibodies of these kits provide high specificity.

Assay range of CEA is 0-60 ng/ml and that of AFP is 0-750 IU/ml. The sensitivities are 0.5 ng/ml and 1 IU/ml, respectively. Within assay variance is less than 5% and between assay variance is less than 10%. Recoveries are 99.2-108.9% (CEA) and 103.9-116.6% (AFP).

CEA antibody does not cross-react with NCA and AFP antibody does not cross-react with prolactin, HCG and HPL.

As mentioned above, Amerwell CEA and Amerwell AFP are very useful especially the treatment of RI waste is a common problem for RI laboratory and Amerwell system has a good advantage for this problem.

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CENTOCOR HUMAN INTERFERON-γ RIA KIT USING MONOCLONAL ANTIBODY. F.Fujioka, Y.Kiya and H.Ikeda. Toray-Fuji Bionics, Inc., Tokyo.

Intensifying interest in the role of human interferon-γ in immunoregulation-and in its therapeutic potential-has made the need for an improved IFN-γ assay apparent. The biological assay currently in use are based on inhibition of virus induced lysis of cultured human fibroblast. A new radioimmunoassay based on monoclonal antibody (MAb) technology offers the speed, sensitivity, reproducibility and type-specificity that the bioassays lack. Recently we have obtained Centocor IFN-γ RIA kit that measures only human IFN-γ. In this kit two types of MAb are used, and the measurement is carried out by solid phase and 2 steps sandwitch method. We made some fundamental experiments using the kit, and obtained the results on the intra and inter assay reproducibility, dilution test, specificity test, comparison with bioassay, and so on.

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DEVELOPEMENT OF DIRECT ANP RIA KIT USING C-TERMINAL RECOGNIZED ANTISERUM. Y.FUKAYA T.YANO,J.MORIKAWA,R.OSAWA EIKEN I.C.L

ANP is polypeptide hormone which is recently purified from the hearts and determined amino acid sequence by MATSUO and KANGAWA.ANP has a strong diuretic activity and is a very interesting hormone.Up to date, many researchers have been trying to develope ANP RIA,but it was difficult because measured value was variable by according to the cross reactivity of antiserum and heterogenicity of ANP in the plasma.Therefore, they were nessessary to extract from plasma to obtain the reasonable value.We have succeeded to develope ANP RIA kit without extraction from plasma.

Antiserum were obtained as follow;α-h-ANP (1-28) was conjugated to bovine thyroglobulin using carbodiimide and conjugated ANP was injected for rabbits.This antiserum recognized C-terminal of α-h-ANP and also β-h-ANP,α-r-ANP.

The RIA is performed delayed assay.The sensitivity of RIA is 3 pg/tube,50 % intercept is 13 pg/tube.We obtained good results in dilution test and recovery test.Intraassay C.V. is 3.0 to 8.5 %,and interassay C.V. is 6.0 to 15.5 %.

We have established a sensitivity and direct ANP RIA kit.This ANP RIA kit is applicable to clinical field.