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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 was described in lg77 by KatO et al. We have been no useful marker previously. SCC Ag and esophagus region for which there had been no useful marker previously. SCC Ag is useful for monitoring in head & neck squamous carcinoma patients and l7" in 163 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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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 fibroblasts. 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 Mabs are used, and the measurement is carried out by solid phase and 2 steps sandwich 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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DEVELOPMENT OF DIRECT ANP RIA KIT USING C-TERMINAL RECOGNIZED ANTISERUM. Y. Fukaya T. Yano, J. Morikawa, R. Osawa Eiken I.C.L

ANP is a 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 develop ANP RIA, but it was difficult because measured value was variable by according to the cross reactivity of antiserum and heterogeneity of ANP in the plasma. Therefore, they were necessary to extract from plasma to obtain the reasonable value. We have succeeded to develop ANP RIA kit without extraction from plasma.

Antiserum were obtained as follow: x-h-ANP (1-28) was conjugated to bovine thyroglobulin using carbodiimide and conjugated ANP was injected for rabbits. This antiserum recognized C-terminal of x-h-ANP and also β-h-ANP, x-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. Intra assay C.V. is 3.0 to 8.5 %, and inter assay 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.