

with Oxford-T₄ but also with T₃-RSU values. We conclude that RIA-MAT T₄ kit is a simple, rapid and reliable method compared to previously

used CPBA or Oxford method and will be able to be applied for the clinical use.

TRH-T Radioimmunoassay

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We reported that synthetic TRH-tartrate (TRH-T) released TRH in human and rats as TRH and that synthetic TRH-T had immunoreactivity to TRH antibody as TRH. TRH-T radioimmunoassay was developed with using TRH-T as antigen to produce TRH-T antibody.

Method:

1. Antibody; TRH-T-BDB-BSA conjugate was injected to rabbits every four weeks and TRH-T antibody was harvested a week after each booster.

2. ¹²⁵I-TRH-T; ¹²⁵I-TRH-T was made by Hunter Greenwood's method and purified through Sephadex G-10 column.

Results:

TRH-T antibody was made in a rabbit after second booster. It had the titer of 1:6000. This antibody had immunoreactivity as TRH and had few immunoreactivity to twenty four TRH analogues and hormones. The practical method of TRH-T radioimmunoassay was performed as; Samples or standards 0.1 ml, ¹²⁵I-TRH-T 0.1 ml

TRH-T antibody 0.05 ml and 0.01 M PO₄ buffer with 0.15 M NaCl, 1% BSA and 0.1 M EDTA 0.35 ml were mixture and incubated at 4°C for 24 hrs. After first incubation, separation of bound and free was performed with second antibody or polyethyleneglycol. With this method, significant dose response curve of TRH-T was observed from 2 pg/ml to 25 ng/ml of TRH-T.

The measurement of human plasma immunoreactive TRH-T was performed as; The plasma was separated at 1°C as soon as after sampling, extracted by ethanol and dried up. Plasma without TRH and extractant by ethanol was 92.7%. The plasma TRH levels in normal male were from undetectable range (less than 2 pg/ml) to 150 pg/ml and in female were from undetectable range to 100 pg/ml.

Conclusion:

We established a suitable radioimmunoassay system for human plasma TRH with using TRH tartrate antiserum.