



DIFFENTIATED THYROID CANCER

- ❖ Human Thyroglobulin
- ❖ Anti-Thyroglobulin autoantibodies

THYRO

Human Thyroglobulin

(Reference : THYRO)

Clinical interest

- ❖ Monitoring of differentiated thyroid cancer.
After total thyroidectomy, thyroglobulin constitutes a reliable early marker for recurrent or metastatic disease.
- ❖ Differential diagnosis of thyroid agenesis and ectopia.
- ❖ Differential diagnosis of thyrotoxicosis:
In amiodarone induced thyrotoxicosis, the thyroglobulin level is high, while it remains undetectable in pseudo-thyrotoxicosis.



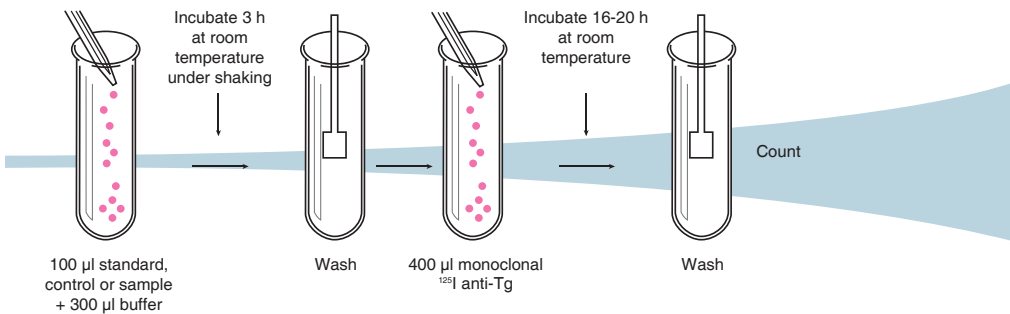
*A reliable tumor marker
for differentiated thyroid carcinoma*

Principle of the test

Immunoradiometric assay using:

- ❖ Four monoclonal anti-Tg antibodies coated onto the walls of the tube
- ❖ A fifth monoclonal anti-Tg antibody, ^{125}I labelled and used as the tracer.

Protocol



Characteristics

- ❖ **Standardization** CRM 457
- ❖ **Working range** 0 – 500 ng/ml
- ❖ **Specificity** Five MAbs directed against antigenic domains not recognized by most anti-Tg autoantibodies (domains I, III, VI)
 - ↳ Minimal interference with anti-Tg autoantibodies (only 5% of the samples show an interference)
 - ↳ Detection of different circulating forms of hTg
- ❖ **Sensitivity**
 - ↳ Detection limit: 0.2 ng/ml
 - ↳ Functional sensitivity: 0.7 ng/ml
- ❖ **Normal value table**

Concentration (ng/ml)	Number of cases (n)
0-5	11
5-10	37
10-20	61
20-30	20
30-40	10
40-50	5
>50	5

Anti-Thyroglobulin autoantibodies

(Reference : TGAB I STEP)

Clinical interest

- ❖ Anti-thyroglobulin autoantibodies (TgAb) are frequently present in samples from patients suffering from autoimmune disease.
In cases of iodine deficiency, TgAb helps to detect autoimmune disease (especially for patients with nodular goiter).
- ❖ TgAb are also used in conjunction with human thyroglobulin assay (hTg).
TgAb may interfere with hTg measurement.
Furthermore, TgAb are a potential tumour marker for differentiated thyroid cancer.

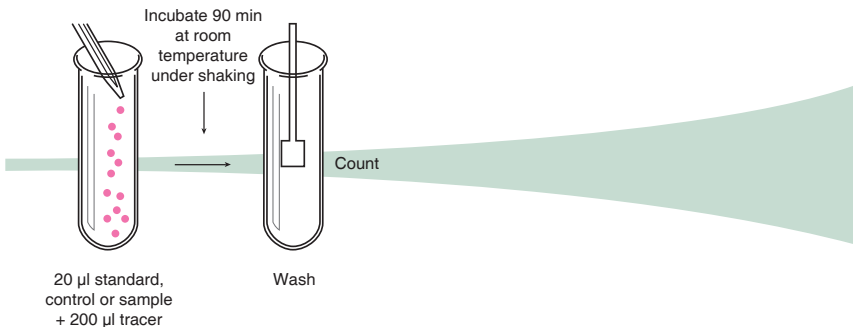
TGAB I STEP



Principle of the test

- ❖ Competitive radioimmunoassay: a monoclonal antibody coated onto the tube competes with the anti-Tg antibodies present in the sample for binding to the specific labelled thyroglobulin (tracer).

Protocol



Characteristics

- ❖ **Standardization** MRC 65/93
- ❖ **Working range** 0 – 2000 IU/ml
- ❖ **Specificity** No cross reactivity with anti-TPO autoantibodies
- ❖ **Sensitivity** ↪ Detection limit: 6 IU/ml
 ↪ Functional sensitivity: 15 IU/ml
- ❖ **Reference values**

TGAB I STEP	
< 30 IU/ml	Negative for anti-Tg autoantibodies
between 30-70 IU/ml	Bordeline
> 70 IU/ml	Positive for anti-Tg autoantibodies



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