DATA SHEET

DE07100 / DE07300 T4, free RIA

Technology	RIA CT
Kit size	100 / 300
Sample material	serum, plasma
Sample preparation	no
Sample volume	25µl
Standard range	2.8 - 75 pmol/l
Incubation	90 min at RT
Measuring system	I-125 <310kBq
Sensitivity	0.4 pmol/l

Special remarks:

Thyroxine (T4) is the principal iodinated compound in the circulation. This amino-acid hormone with a molecular weight of 777Da, exerts its biological activity primarily after deiodination to triiodthyronine (T3). T3 acts on cellular metabolism via receptors in the nucleus. Serume thyroxine is strongly bound three proteins, listed in descending order to their affinity for the hormone: Thyroxine-Binding-Globulin (TBG), Thyroxine-Binding-Pre-Albumin (TBPA) and Albumin. The concentration of hormone not bound to proteins (free-T4) is therefore very low, approx. 0,03% when compared to total circulating hormone. This free hormone is responsible for biological activity. Unlike in the case of total T3 and T4 concentrations, the free T4 concentration is maintained independently of changes of binding protein levels and therefore remains normal, when levels of TBG are high (congenitally, pregnancy, use of oral estrogens or contraceptive) or when TBG levels are low (congenitally, use of androgens, or salicylates, nephritic- syndrome), or again, when the binding capacity of the proteins decreases. Free-T4 then shows the true thyroid status. Its concentration is abnormally high in cases of central or peripheral hyperthyroidism or following thyroxine treatment. Free-T4 is abnormally low in cases of central or peripheral hypothyroidism. In certain several non-thyroidal-illness (NTI), decreased levels may also be found (Low-T4-syndrom).

Gentaur Molecular Products
Voortstraat 49
1910 Kampenhout, Belgium