

ARG83002 Human T4 / Thyroxine (free) ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

Product Description	ARG83002 Human T4 / Thyroxine (free) ELISA Kit is an enzyme immunoassay kit for the quantification of free T4 / Thyroxine in human serum.
Tested Reactivity	Hu
Tested Application	ELISA
Specificity	Tested but cross-reacted at less than 0.04%: Acetylsalicylic acid, 3,5-Diiodo-LThyronine, 3,5-Diiodo-L-Tyrosine and 3-Iodo-L-Tyrosine.
Target Name	T4 / Thyroxine (free)
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm
Sensitivity	1.0 pg/ml
Sample Type	Serum.
Standard Range	2 - 80 pg/ml
Sample Volume	25 µl

Application Instructions

Assay Time	1 h, 15 min
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Properties

Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

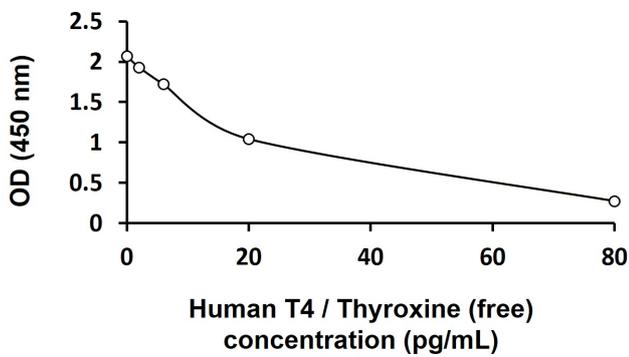
Gene Full Name	T4 / Thyroxine (free)
Background	Thyroxine, the principal thyroid hormone, circulates in blood almost completely bound to carrier proteins. The main carrier is thyroxine-binding globulin (TBG). However, only the free (unbound) portion of thyroxine is responsible for the biological action. Further, the concentrations of the carrier proteins are altered in many clinical conditions, such as pregnancy. In normal thyroid functions as the concentrations of the carrier proteins alters, the total thyroxine level changes so that the free thyroxine concentration remains constant. Thus, measurements of free thyroxine concentration correlate better with clinical status than total thyroxine levels. For example, the increase in total thyroxine associated with pregnancy, oral contraceptives and estrogen therapy occasionally results in total T4 levels over the limits of normal while the free thyroxine concentration remains in the normal reference range. Masking of abnormal thyroid function can also occur in both hyper and hypothyroid conditions by

alterations in the TBG concentration. The total T4 can be elevated or lowered by TBG changes such that the normal reference level result. Again, the free thyroxine concentration typically uncovers the patient's actual clinical status. This microplate enzyme immunoassay methodology provides the technician with optimum sensitivity while requiring few technical manipulations. In this method, serum reference, patient specimen, or control is first added to a microplate well. Enzyme-T4 conjugate (analog method) is added, then the reactants are mixed. A competition reaction results between the enzyme conjugate and the free thyroxine for a limited number of antibody combining sites immobilized on the well. After the completion of the required incubation period, the antibody bound enzyme-thyroxine conjugate is separated from the unbound enzyme-thyroxine conjugate by aspiration or decantation. The activity of the enzyme present on the surface of the well is quantitated by reaction with a suitable substrate to produce color. The employment of several serum references of known free thyroxine concentration permits construction of a graph of activity and concentration. From comparison to the dose response curve, an unknown specimen's activity can be correlated with free thyroxine concentration.

Research Area

Signaling Transduction kit

Images



ARG83002 Human T4 / Thyroxine (free) ELISA Kit standard curve image

ARG83002 Human T4 / Thyroxine (free) ELISA Kit results of a typical standard run with optical density reading at 450 nm.