



Rat Thyroglobulin, TG ELISA Kit

Product Code	CSB-E08240r
Abbreviation	TG
Protein Biological Process 1	Biosynthesis/Metabolism
Target Name	thyroglobulin
Uniprot No.	P06882
Alias	AITD3, TGN
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Protein Biological Process 3	Thyroid hormones biosynthesis
Sample Types	serum, plasma, tissue Homogenates
Detection Range	10 ng/mL-160 ng/mL
Sensitivity	10 ng/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Metabolism
Gene Names	Tg
Tag Info	quantitative
Protein Description	Competitive

Description

The Rat Thyroglobulin (TG) ELISA Kit is a perfect solution for researchers studying metabolism?thyroid-related diseases. This quantitative assay kit allows for the detection of Thyroglobulin (Tg) in serum, plasma, and tissue homogenates of Rattus norvegicus (rat) samples.

With a detection range of 10 ng/mL to 160 ng/mL and a sensitivity of 10 ng/mL, this ELISA kit provides accurate and reliable results for your research needs. The assay time is quick, ranging from 1-5 hours, and the sample volume required is only 50-100 ul.

The detection wavelength for this kit is 450 nm, providing high sensitivity and specificity for the measurement of Tg in rat samples. The assay principle is based on the competitive method, providing high specificity and accuracy for the



detection of this protein.

This Rat Thyroglobulin (TG) ELISA Kit has been cited in over 5 peer-reviewed publications, demonstrating the reliability and accuracy of this kit in the scientific community.

Target Details

Thyroglobulin (Tg) is a glycoprotein homodimer produced predominantly by the thyroid gland. It acts as a substrate for the synthesis of thyroxine and triiodothyronine as well as the storage of the inactive forms of thyroid hormone and iodine. Thyroglobulin is secreted from the endoplasmic reticulum to its site of iodination, and subsequent thyroxine biosynthesis, in the follicular lumen. Mutations in this gene cause thyroid dysmorphogenesis, manifested as goiter, and are associated with moderate to severe congenital hypothyroidism. Polymorphisms in this gene are associated with susceptibility to autoimmune thyroid diseases (AITD) such as Graves disease and Hashimoto thyroiditis.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<15%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<15%

Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of rat TG in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	95
	Range %	89-102
1:2	Average %	92
	Range %	86-99
1:4	Average %	95
	Range %	87-105
1:8	Average %	90
	Range %	83-102

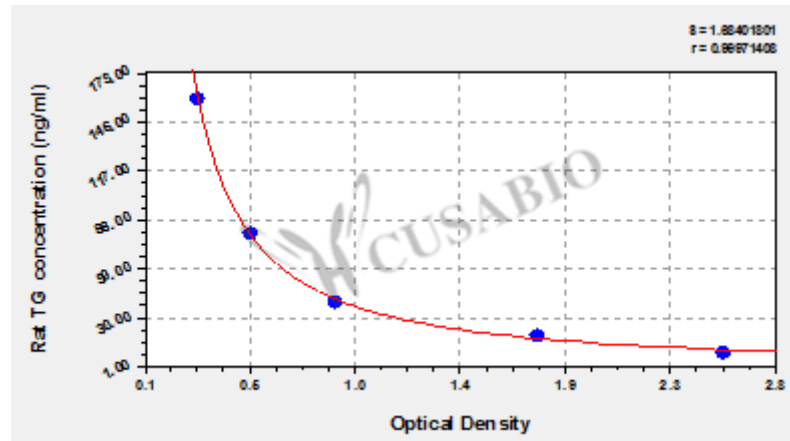
Recovery

The recovery of rat TG spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	96	89-100
EDTA plasma (n=4)	95	88-103

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



ng/ml	OD1	OD2	Average
10	2.553	2.568	2.561
20	1.748	1.763	1.756
40	0.885	0.875	0.880
80	0.515	0.511	0.513
160	0.285	0.287	0.286