Thyroglobulin

Thyroglobulin (TG) is a 660 kDa dimeric protein consisting of two subunits containing 2768 amino acids. TG is produced entirely by thyroid gland and stored in the lumen of thyroid follicles. Upon stimulation by thyroid stimulating hormone (TSH), TG is degraded to end product the thyroid hormones thyroxine (T4) and triiodothyronine (T3) that are subsequently secreted into the bloodstream. In human physiological system, the levels of TG circulating in the bloodstream are low.

TG levels in the blood can be used as a tumor marker for certain kinds of thyroid cancer. TG levels in the blood can also be elevated in cases of Graves' disease.

Anti-TG monoclonal antibodies

Three latest anti-TG monoclonal antibodies have been developed by CUSAg. On the chemilumineseent immunoassay, multiple clinical samples have been respectively tested by self-made anti-TG antibody and high-quality kit, the results had good correlation between them. This product is qualified for IVD assay development.

PROPERTIES	SPECIFICATION
Target species	Human
Host animal	Mice Balb/c
Cell line used for fusion	Sp2/0
Immunogen	Human Thyroglobulin
Purification method, purity	Protein G affinity chromatography, >90% (SDS-PAGE)
Presentation	MAb solution in PBS with 15 mM NaN_3 (pH 7.4)
Application	chemilumineseent immunoassay assay (CLIA)
	CSB-DA263HmN①
Catalog Number:	CSB-DA263HmN②
	CSB-DA263HmN③

Note: Product contains sodium azide as a preservative. Although the amount of sodium azide is very small, appropriate care must be taken when handling this product

1. Calibration curve

All MAbs were tested in pairs as capture and detection antibodies to select the best two-site MAb combinations for the development of a quantitative sandwich immunoassay. Calibration curves for two best two-site combinations, which utilized different anti-TG MAbs, are shown in Fig.1. Detection antibodies were labeled with horse reddish Peroxidase (HRP).The best selected MAb combinations for the development of quantitative human TG immunoassays are (capture-detection) respectively:

Mab combination A : CSB-DA263HmN①-CSB-DA263HmN②

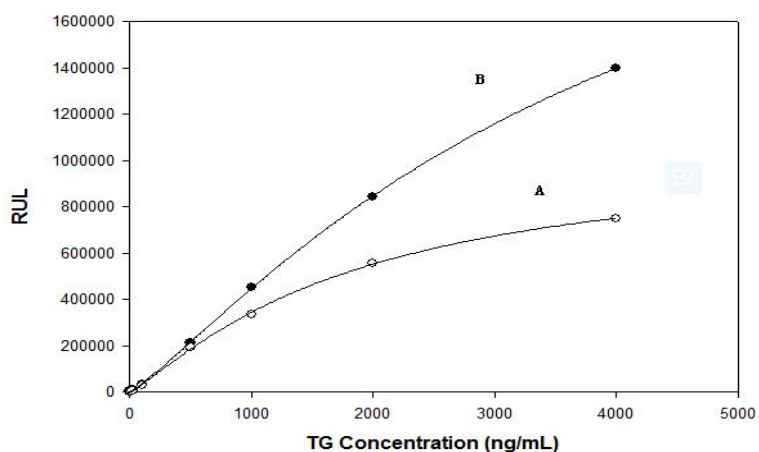Mab combination B : CSB-DA263HmN①-CSB-DA263HmN③

Fig.1 Calibration curve for TG CLIA

2. Clinical analysis

An amount of samples from donors were respectively detected by the high-quality kit ,CLIA TG (A and B). The results had good correlation between CLIA TG assays and kits.
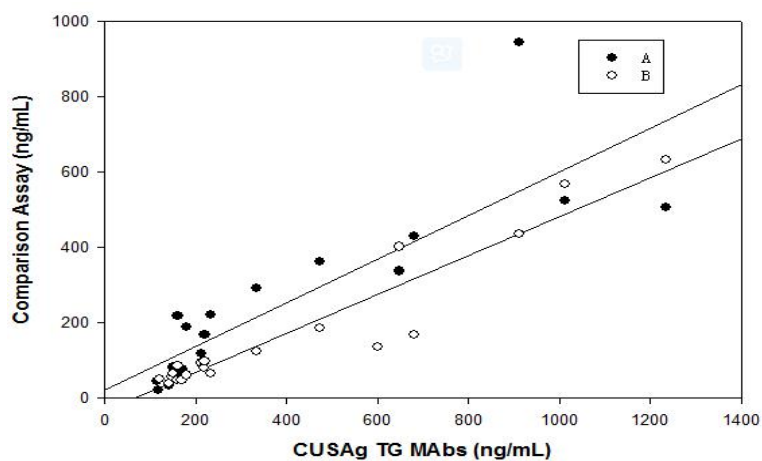

Fig.2 The Comparisons between CLIA TG and diagnostic kit