



Thyroid Diseases

Antibodies and antigens



Introduction

Thyroid is an endocrine gland that stimulates hormones, which are tightly linked to the energy regulation. Its interrelationship with the hypothalamus and pituitary gland forms a feedback loop, which controls and balances the metabolism of our body. Thyroid diseases are among the most abundant endocrine disorders globally. They can be life threatening, but usually curable and treatable. This makes the diagnosis of thyroid diseases very important.

HyTest offers a vast range of antibodies and antigens that enable our customers to develop their thyroid disease assays. We continue to develop new products to the market and our products are trusted by customers worldwide.

Thyroid stimulating hormone (TSH)

TSH is produced by the pituitary gland and is considered as the first line test in the assessment of thyroid function. It is also widely used for the diagnosis of primary and secondary hypothyroidism. The sensitivity of TSH assays has become one of the

critical criteria to evaluate the performance of the new generation assays. At HyTest, we provide high-quality monoclonal antibodies for new generation TSH assay development.

MONOCLONAL ANTIBODIES

Product name	Cat. #	MAB	Remarks
Thyroid stimulating hormone (TSH)	2TS11cc	7G12cc	<i>In vitro</i> , Enzyme immunoassay, whole molecule, no cross-reaction with human LH, FSH, HCG
		11E4cc	<i>In vitro</i> , Enzyme immunoassay, beta-subunit, no cross-reaction with human LH, FSH, HCG
		10C7cc	<i>In vitro</i> , Enzyme immunoassay, whole molecule, no cross-reaction with human LH, FSH, HCG
		1CT1cc	<i>In vitro</i> , Enzyme immunoassay, Western blotting in non-reducing conditions, beta-subunit, no cross-reaction with human LH, FSH, HCG
	2TS11	7CT8	Enzyme immunoassay, beta-subunit, no cross-reaction with human LH, FSH, HCG

Abbreviations: LH Luteinizing hormone, FSH Follicle stimulating hormone; HCG Human chorionic gonadotropin

Thyroxin (T4) and Triiodothyronine (T3)

T4 is the major thyroid hormone secreted by the thyroid gland. By removal of an iodine atom, T4 is converted to T3 in the circulation. T4 and T3 are often measured either as total form (total T4 and total T3) or free form (free T4 and free T3) in

combination with TSH as thyroid function tests for diagnosis in the clinical setup. At HyTest, we provide high-quality monoclonal antibodies for T4 and T3 assay development.

MONOCLONAL ANTIBODIES

Product name	Cat. #	MAB	Remarks
Thyroxin, human (T4)	2T6	1H1cc	<i>In vitro</i> , Enzyme immunoassay, Radioimmunoassay
		XM212cc	<i>In vitro</i> , Enzyme immunoassay
Triiodothyronine (T3)	2T7	3A6cc	<i>In vitro</i> , Enzyme immunoassay, Radioimmunoassay

Thyroid peroxidase (TPO)

TPO is an enzyme produced by the thyroid gland. It has an important role in production of other thyroid related hormones. TPO is also a target of autoantibodies that can cause thyroid related autoimmune disorders such as Hashimoto's disease or Graves' disease. Clinically, if TPO antibody value in the blood is high, the patient is posed to risk of

Hashimoto's or post-partum primary hypothyroidism disorder like Graves' disease. Furthermore, recent studies have presented the associations of thyroid autoimmunity with infertility. At HyTest, we provide high-quality monoclonal antibodies and recombinant antigen for TPO assay development.

MONOCLONAL ANTIBODIES

Product name	Cat. #	MAB	Remarks
Thyroid peroxidase (TPO)	4TP15	6H7	Enzyme immunoassay
		TPO28	Enzyme immunoassay, Western blotting
		TPO34	Enzyme immunoassay, Western blotting
		TPO35	Enzyme immunoassay

ANTIGEN

Product name	Cat. #	Purity	Source
Thyroid peroxidase (TPO), recombinant	8RTPO	>95%	Recombinant

Thyroglobulin (Tg) and Thyroglobulin antibodies (TgAb)

Tg is measured to monitor patients with differentiated thyroid cancer (DTC) after surgery and treatment. It is a critical step in monitor the disease persistence and recurrence. TgAb, also called Anti-Tg, is measured in conjunction with Tg to monitor patients

with DTC. Furthermore, TgAb is also associated with autoimmune thyroid diseases. At HyTest, we provide high-quality native antigen and monoclonal antibodies to develop Tg and TgAb assays.

MONOCLONAL ANTIBODIES

Product name	Cat. #	MAB	Remarks
Thyroglobulin	2TG12cc	5E6cc	<i>In vitro</i> , Enzyme immunoassay
		5F9cc	<i>In vitro</i> , Enzyme immunoassay, Immunohistochemistry

ANTIGENS

Product name	Cat. #	Purity	Source
Thyroglobulin	8TG52	>90%	Human thyroid gland
Thyroglobulin, recombinant	8RTG4	>95%	Recombinant

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