

Rabbit Anti-TSHR (CT)antibody

SL0206R

Product Name	TSHR (CT)
Chinese Name	促甲状腺素受体抗体 (C 端)
Alias	hTSHR I; hTSHRI; LGR 3; LGR3; MGC75129; Thyroid adenoma hyperfunctioning; Thyroid carcinoma with thyrotoxicosis; Thyroid Stimulating Hormone Receptor; Thyrotropin Receptor; Thyrotropin receptor I; TSH R; TSHR; Thyroid stimulating hormone receptor; TSHR_HUMAN. 促甲状腺激素受体
Research Area	Cell biology Growth factors and hormones The cell membrane 受体 Endocrinopathy
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human (predicted:Rat,Chicken,Pig,Cow,Horse,Rabbit,GuineaPig) WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Applications	
Theoretical molecular weight	86kDa
Cellular localization	The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human TSHR: 648-740/764 <Extracellular>
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human,

therapeutic or diagnostic applications.

PubMed

[PubMed](#)

The glycoprotein hormone receptor family consists of the luteinizing hormone receptor, the follicle-stimulating hormone receptor, and the thyroid stimulating hormone(TSH) receptor. TSH, which is released from the pituitary gland, binds to the TSH receptor on thyroid cells to control size and function of the thyroid gland (De Felice et al. 2004). The TSH receptor signals through Gs to elevate intracellular cAMP in the thyroid gland, which regulates iodide uptake, and transcription of thyroglobulin (Tg), thyroid peroxidase (TPO), and sodium-iodide symporter. The TSH receptor also signals Gq and phospholipase C to regulate iodide efflux, H₂O₂ production, and thyroglobulin iodination. Autoimmunity to the TSH receptor causes hyperthyroidism (Graves disease) or hypothyroidism (Hashimoto thyroiditis) when the autoantibodies function as agonists or antagonists, respectively, at the TSH receptor (Rapoport and McLachlan, 2001; Davies et al., 2002). Millipore's cloned human TSH receptor-expressing cell line is made in the Chem-10 host, which supports high levels of recombinant TSH receptor expression on the cell surface and contains high levels of the promiscuous G protein to couple the receptor to the calcium signaling pathway. Thus, the cell line is an ideal tool for screening for antagonists of interactions between TSH and its ligands.

Product Detail

Function:

Receptor for thyrotropin. Plays a central role in controlling thyroid cell metabolism. The activity of this receptor is mediated by G proteins which activate adenylate cyclase. Also acts as a receptor for thyrostimulin (GPA2+GPB5).

Subunit:

Interacts (via the PDZ-binding motif) with SCRIB; regulates TSHR trafficking and function.

Subcellular Location:

Cell membrane; Multi-pass membrane protein.

Tissue Specificity:

Expressed in the thyroid.

DISEASE:

Note=Defects in TSHR are found in patients affected by hyperthyroidism with different etiologies. Somatic, constitutively activating TSHR mutations and/or constitutively activating G(s)alpha mutations have been identified in toxic thyroid nodules (TTNs) that are the predominant cause of hyperthyroidism in iodine deficient areas. These mutations lead to TSH independent activation of the cAMP cascade resulting in thyroid growth and hormone production. TSHR mutations are found in autonomously functioning nodules (AFTN), toxic multinodular goiter (TMNG) and

hyperfunctioning thyroid adenomas (HTA). TMNG encompasses a spectrum of different clinical entities, ranging from a single hyperfunctioning nodule within an enlarged thyroid, to multiple hyperfunctioning areas scattered throughout the gland. HTA are discrete encapsulated neoplasms characterized by TSH-independent autonomous growth, hypersecretion of thyroid hormones, and TSH suppression. Defects in TSHR are also a cause of thyroid neoplasms (papillary and follicular cancers).

Note=Autoantibodies against TSHR are directly responsible for the pathogenesis and hyperthyroidism of Graves disease. Antibody interaction with TSHR results in an uncontrolled receptor stimulation.

Hypothyroidism, congenital, non-goitrous, 1 (CHNG1) [MIM:275200]: A non-autoimmune condition characterized by resistance to thyroid-stimulating hormone (TSH) leading to increased levels of plasma TSH and low levels of thyroid hormone. It presents variable severity depending on the completeness of the defect. Most patients are euthyroid and asymptomatic, with a normal sized thyroid gland. Only a subset of patients develop hypothyroidism and present a hypoplastic thyroid gland. Note=The disease is caused by mutations affecting the gene represented in this entry.

Familial gestational hyperthyroidism (HTFG) [MIM:603373]: A condition characterized by abnormally high levels of serum thyroid hormones occurring during early pregnancy. Note=The disease is caused by mutations affecting the gene represented in this entry.

Hyperthyroidism, non-autoimmune (HTNA) [MIM:609152]: A condition characterized by abnormally high levels of serum thyroid hormones, thyroid hyperplasia, goiter and lack of anti-thyroid antibodies. Typical features of Graves disease such as exophthalmia, myxedema, antibodies anti-TSH receptor and lymphocytic infiltration of the thyroid gland are absent. Note=The disease is caused by mutations affecting the gene represented in this entry.

Similarity:

Belongs to the G-protein coupled receptor 1 family. FSH/LSH/TSH subfamily. Contains 7 LRR (leucine-rich) repeats.

SWISS:

P16473

Gene ID:

7253

Database links:

[Entrez Gene: 7253](#) Human

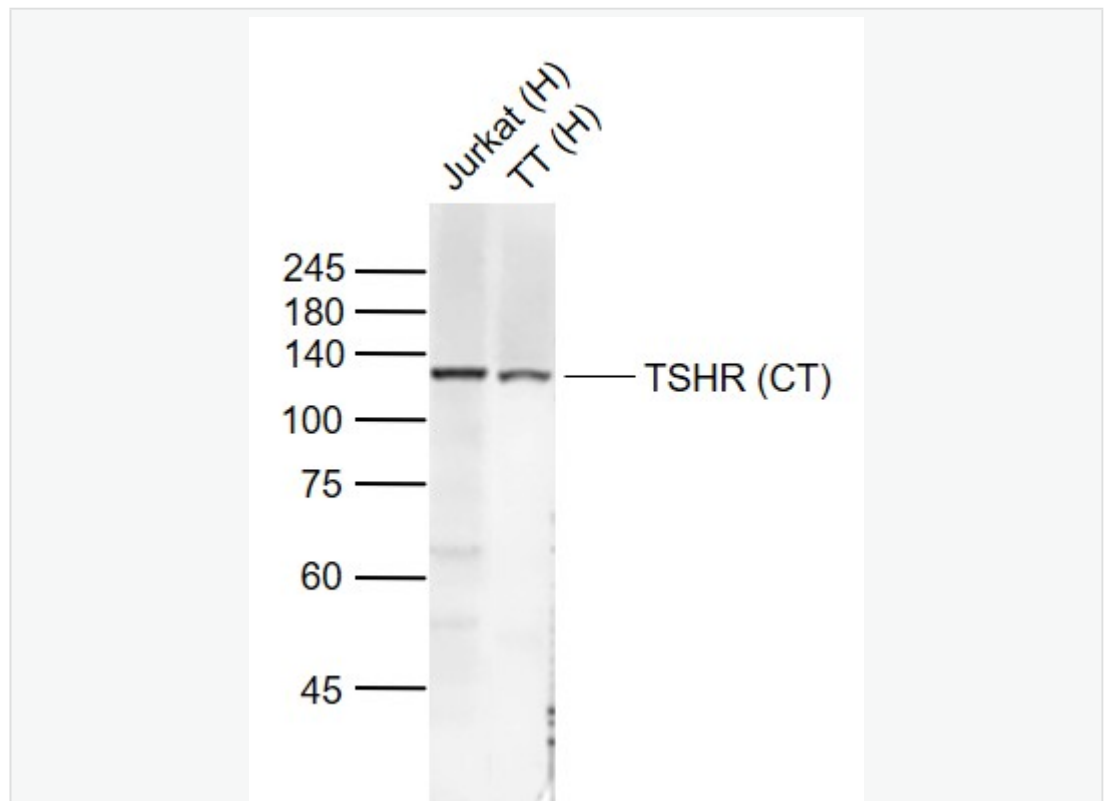
[Omim: 603372](#) Human

[SwissProt: P16473](#) Human

[Unigene: 123078](#) Human

TSHR(Thyroid stimulating hormone receptor)是垂体前叶嗜碱细胞分泌的一种 glycoprotein，直接作用于甲状腺，并能影响其结构功能。该抗体主要用于垂体 Tumour 功能性分类的研究。

**Product
Picture**



Sample:

Lane 1: Human Jurkat cell lysates

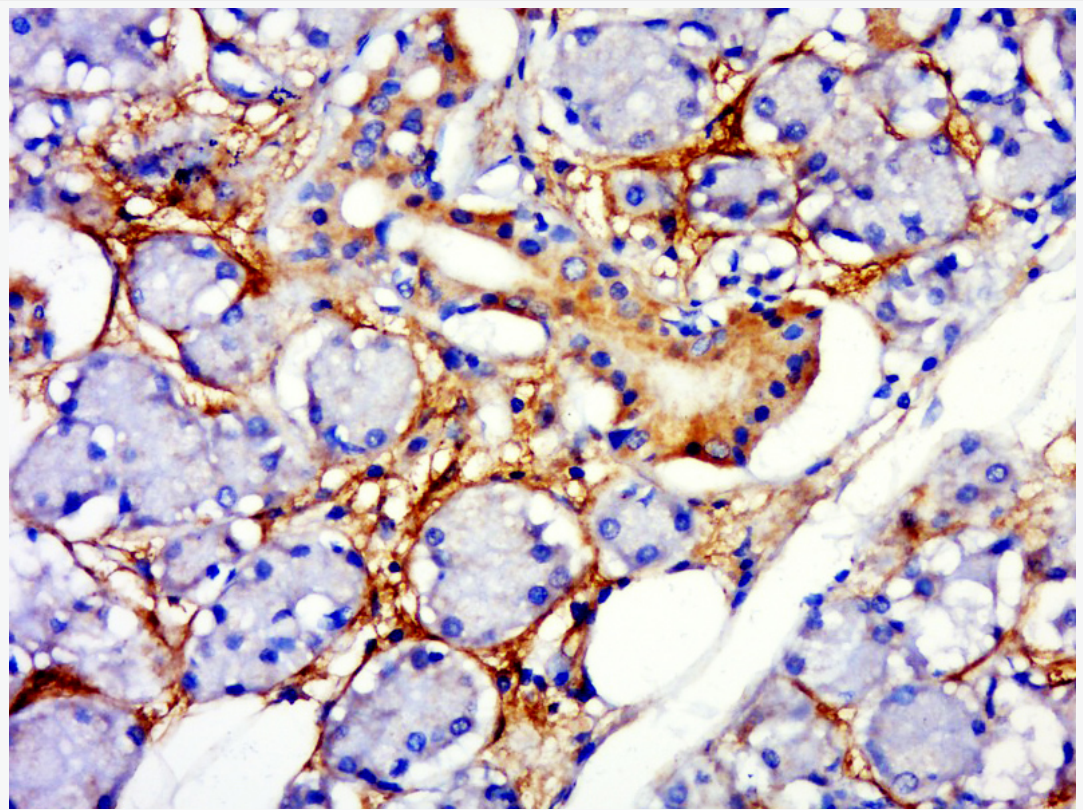
Lane 2: Human TT cell lysates

Primary: Anti-TSHR (CT) (SL0206R) at 1/2000 dilution

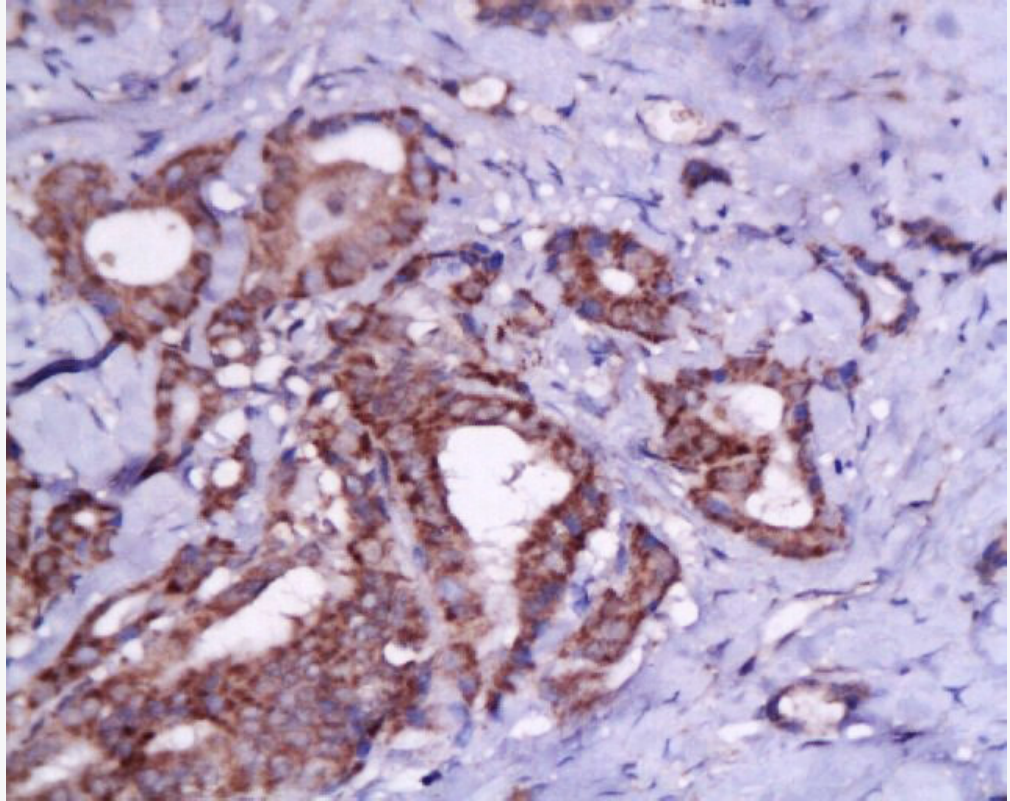
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 86 kD

Observed band size: 130 kD



Paraformaldehyde-fixed, paraffin embedded (human parotid gland); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TSHR) Polyclonal Antibody, Unconjugated (SL0206R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Tissue/cell: human thyroid carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-TSHR(CT) Polyclonal Antibody, Unconjugated(SL0206R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining