

Anti-TSH Receptor/TSH-R antibody [4C1] ab27974

[6 References](#) [1 Image](#)

Overview

Product name	Anti-TSH Receptor/TSH-R antibody [4C1]
Description	Mouse monoclonal [4C1] to TSH Receptor/TSH-R
Host species	Mouse
Tested applications	Suitable for: IHC-P Unsuitable for: ELISA
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Epitope	Ab27974 reacts with an epitope located in the extracellular region of TSH receptor.
Positive control	Human Thyroid gland.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
Storage buffer	pH: 7.40 Preservative: 0.09% Sodium azide Constituent: PBS
Purity	Protein G purified
Purification notes	Ab27974 was purified by affinity chromatography, from tissue culture supernatant.
Clonality	Monoclonal
Clone number	4C1
Myeloma	NS1/1-Ag4-1

Isotype

IgG2a

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab27974 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Antigen retrieval is not required.

Application notes

Is unsuitable for ELISA.

Target

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).

Tissue specificity

Expressed in the thyroid.

Involvement in disease

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 thyroid 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).

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

Familial gestational hyperthyroidism

Hyperthyroidism, non-autoimmune

Sequence similarities

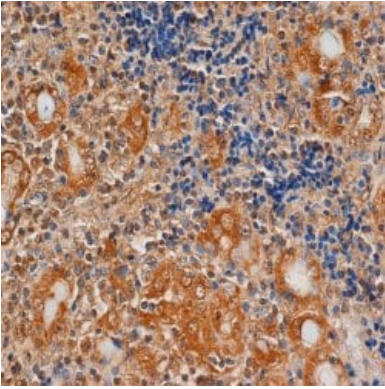
Belongs to the G-protein coupled receptor 1 family. FSH/LSH/TSH subfamily.

Contains 7 LRR (leucine-rich) repeats.

Cellular localization

Cell membrane.

Images



ab27974 staining TSH Receptor/TSH-R in Human thyroid tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TSH Receptor/TSH-R antibody [4C1] (ab27974)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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