

TSHR (H-155): sc-13936

BACKGROUND

Various hormones are secreted from the anterior pituitary during development and growth, including thyroid-stimulating hormone (TSH, also known as thyrotropin), follicle-stimulating hormone (FSH) and leutinizing hormone (LH). TSH, FSH, and LH are heterodimers formed from a common α chain and a unique β chain. TSH is a glycoprotein involved in the control of thyroid structure and metabolism, which stimulates the release of the thyroid hormones. TSH is regulated by thyroid hormone (T3) and various retinoid compounds. TSH binds to the thyroid-stimulating hormone receptor (TSHR), which is cleaved into two subunits, A and B, and plays a major role in regulating thyroid function. The third cytoplasmic loop of TSHR has been identified as critical for its role in regulating inositol phosphate and cAMP formation. In Graves disease, an autoimmune disorder, TSHR is activated by autoantibodies, which may be stimulated by the cleavage of the A and B subunits.

CHROMOSOMAL LOCATION

Genetic locus: TSHR (human) mapping to 14q31.1; Tshr (mouse) mapping to 12 D3.

SOURCE

TSHR (H-155) is a rabbit polyclonal antibody raised against amino acids 1-155 of TSHR of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TSHR (H-155) is recommended for detection of TSHR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TSHR siRNA (h): sc-36754, TSHR siRNA (m): sc-36755, TSHR shRNA Plasmid (h): sc-36754-SH, TSHR shRNA Plasmid (m): sc-36755-SH, TSHR shRNA (h) Lentiviral Particles: sc-36754-V and TSHR shRNA (m) Lentiviral Particles: sc-36755-V.

Molecular Weight of intact TSHR: 115 kDa.

Molecular Weight of TSHR A subunit: 62 kDa.

Molecular Weight of TSHR B subunit: 42 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, HeLa whole cell lysate: sc-2200 or human thyroid extract: sc-363782.

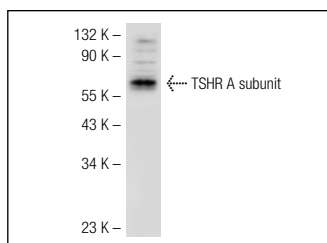
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

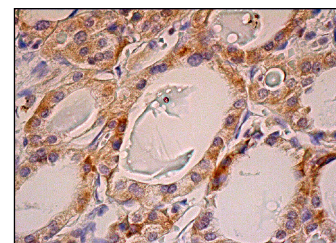
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



TSHR (H-155): sc-13936. Western blot analysis of TSHR expression in 293T whole cell lysate.



TSHR (H-155): sc-13936. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Fukushima, H., et al. 2008. Development of a novel preparation method of recombinant proteoliposomes using baculovirus gene expression systems. *J. Biochem.* 144: 763-770.
2. Tsui, S., et al. 2008. Evidence for an association between thyroid-stimulating hormone and Insulin-like growth factor 1 receptors: a tale of two antigens implicated in Graves' disease. *J. Immunol.* 181: 4397-4405.
3. Fiore, A.P., et al. 2009. High iodine concentration attenuates RET/PTC3 oncogene activation in thyroid follicular cells. *Thyroid* 19: 1249-1256.
4. Fukushima, H., et al. 2009. Diagnosis and discrimination of autoimmune Graves' disease and Hashimoto's disease using thyroid-stimulating hormone receptor-containing recombinant proteoliposomes. *J. Biosci. Bioeng.* 108: 551-556.
5. Elgadi, A., et al. 2010. Tissue-specific knockout of TSHr in white adipose tissue increases adipocyte size and decreases TSH-induced lipolysis. *Biochem. Biophys. Res. Commun.* 393: 526-530.
6. Read, M.L., et al. 2011. Proto-oncogene PBF/PTTG1IP regulates thyroid cell growth and represses radioiodide treatment. *Cancer Res.* 71: 6153-6164.
7. Masini, M.A., et al. 2012. The impact of long-term exposure to space environment on adult mammalian organisms: a study on mouse thyroid and testis. *PLoS ONE* 7: e35418.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **TSHR (C-10): sc-515556** or **TSHR (3B12): sc-53542**, our highly recommended monoclonal alternatives to TSHR (H-155).