**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.

**SOURCE**

TSHR (4C1) is a mouse monoclonal antibody raised against an extracellular domain of TSHR of human origin, epitope mapping to amino acids 381-384.

**PRODUCT**

Each vial contains 200 µg IgG\(_2\) kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin. TSHR (4C1) is available conjugated to either phycoerythrin (sc-32262 PE) or fluorescein (sc-32262 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

**APPLICATIONS**

TSHR (4C1) is recommended for detection of TSHR of human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10\(^6\) cells). Suitable for use as control antibody for TSHR siRNA (h): sc-36754, TSHR shRNA Plasmid (h): sc-36754-SH and TSHR shRNA (h) Lentiviral Particles: sc-36754-V.

Molecular Weight of intact TSHR: 115 kDa.

Molecular Weight of TSHR A subunit: 62 kDa.

Molecular Weight of TSHR B subunit: 42 kDa.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunofluorescence: use m-IgG\(_2\) BP-FITC: sc-516140 or m-IgG\(_2\) BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz\textregistered Mounting Medium: sc-24941 or UltraCruz\textregistered Hard-set Mounting Medium: sc-359850.

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

**PROTOCOLS**

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