

TSH β (D-6): sc-365801

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 luteinizing 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 β is regulated by thyroid hormone (T3) and various retinoid compounds. TSH β binds to the thyroid-stimulating hormone receptor (TSHR), which plays a major role in regulating thyroid function. TSHR is thought to exist in multiple glycosylation states. The third cytoplasmic loop of TSHR has been identified as critical for its role in regulating inositol phosphate and cAMP formation.

CHROMOSOMAL LOCATION

Genetic locus: TSHB (human) mapping to 1p13.2; Tshb (mouse) mapping to 3 F2.2.

SOURCE

TSH β (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 101-131 near the C-terminus of TSH β of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_3$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365801 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

TSH β (D-6) is recommended for detection of TSH β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TSH β (D-6) is also recommended for detection of TSH β in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for TSH β siRNA (h): sc-39321, TSH β siRNA (m): sc-39322, TSH β shRNA Plasmid (h): sc-39321-SH, TSH β shRNA Plasmid (m): sc-39322-SH, TSH β shRNA (h) Lentiviral Particles: sc-39321-V and TSH β shRNA (m) Lentiviral Particles: sc-39322-V.

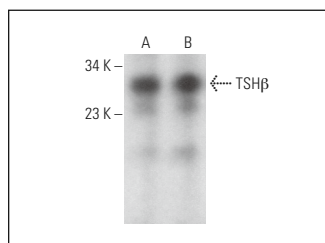
Molecular Weight of TSH β : 17 kDa.

Positive Controls: mouse brain extract: sc-2253 or human brain extract: sc-364375.

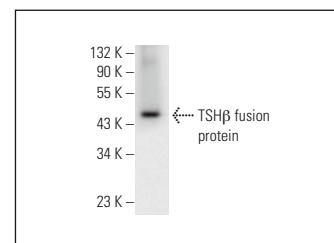
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TSH β (D-6): sc-365801. Western blot analysis of TSH β expression in human brain (A) and mouse brain (B) tissue extracts.



TSH β (D-6): sc-365801. Western blot analysis of human recombinant TSH β fusion protein.

SELECT PRODUCT CITATIONS

1. Liu, C.R., et al. 2015. Functional human TSH β splice variant produced by plasma cell may be involved in the immunologic injury of thyroid in the patient with Hashimoto's thyroiditis. *Mol. Cell. Endocrinol.* 414: 132-142.
2. Wu, Z., et al. 2022. TSH-TSHR axis promotes tumor immune evasion. *J. Immunother. Cancer* 10: e004049.

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.