

# TRH (A-12): sc-99689

## BACKGROUND

TRH (thyrotrophin-releasing hormone), also known as TRF, prothyroliberin or Thyroliberin, is a 242 amino acid secreted protein that belongs to the TRH family and is expressed in the hypothalamus in response to hypothyroidism. TRH is a hypothalamic tripeptide that stimulates the release of thyrotrophin (TSH) and prolactin through its receptor in the anterior pituitary gland. In addition to regulating the biosynthesis of TSH, TRH acts as a neurotransmitter and a neuromodulator in the central and peripheral nervous systems. An integral membrane ectopeptidase protein, PGP-II (pyroglutamyl peptidase II), cleaves and inactivates TRH in neural and hormonal transmissions. TRH may function as a melanoma autocrine growth factor in melanomas and dysplastic nevi.

## REFERENCES

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- Prokai, L., et al. 1999. Metabolism-based brain-targeting system for a thyrotrophin-releasing hormone analogue. *J. Med. Chem.* 42: 4563-4571.
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- Vargas, M.A., et al. 2002. Thyrotrophin-releasing hormone-induced down-regulation of pyroglutamyl aminopeptidase II activity involves L-type calcium channels and cam kinase activities in cultures of adenohypophyseal cells. *J. Neuroendocrinol.* 14: 184-193.
- Prokai, L., et al. 2004. Centrally acting and metabolically stable thyrotrophin-releasing hormone analogues by replacement of histidine with substituted pyridinium. *J. Med. Chem.* 47: 6025-6033.

## CHROMOSOMAL LOCATION

Genetic locus: TRH (human) mapping to 3q22.1.

## SOURCE

TRH (A-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of TRH of human origin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99689 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TRH (A-12) is recommended for detection of TRH of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TRH siRNA (h): sc-77977, TRH shRNA Plasmid (h): sc-77977-SH and TRH shRNA (h) Lentiviral Particles: sc-77977-V.

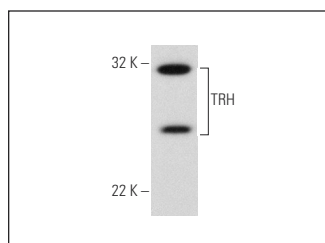
Molecular Weight of TRH: 30 kDa.

Positive Controls: A549 cell lysate: sc-2413.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



TRH (A-12): sc-99689. Western blot analysis of TRH expression in A549 whole cell lysate.

## RESEARCH USE

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