

# pro-TIP39 (G-19): sc-22690

## BACKGROUND

Tuberoinfundibular peptide of 39 residues (TIP39) and the parathyroid hormone-2 (PTH2) receptor form part of an extended family of related signaling molecules that includes the PTH1 receptor, which responds to PTH and PTH-related protein. The polypeptide TIP39 is a potent activator of the parathyroid hormone (PTH)-2 receptor (PTH2, P2R) and an antagonist of the PTH-1 receptor (PTH1, P1R). TIP39 stimulates cAMP accumulation in cells expressing PTH2, but it is inactive at the PTH1 receptor site. The TIP39 gene encoding the protein maps at chromosome 19q13.33. TIP39 may have an important role in spermatogenesis. Mouse TIP39 differs from human TIP39 by four amino acid residues. TIP39 expression can be seen in testis, seminiferous tubuli, liver, kidney and in several brain regions such as nucleus subparafascicularis thalami, nucleus centralis pontis and nucleus ruber.

## REFERENCES

1. Hoare, S.R., Clark, J.A. and Usdin, T.B. 2000. Molecular determinants of tuberoinfundibular peptide of 39 residues (TIP39) selectivity for the parathyroid hormone-2 (PTH2) receptor. N-terminal truncation of TIP39 reverses PTH2 receptor/PTH1 receptor binding selectivity. *J. Biol. Chem.* 275: 27274-27283.
2. John, M.R., Arai, M., Rubin, D.A., Jonsson, K.B. and Juppner, H., 2002. Identification and characterization of the murine and human gene encoding the tuberoinfundibular peptide of 39 residues. *Endocrinology* 143: 1047-1057
3. Eichinger, A., Fiaschi-Taesch, N., Massfelder, T., Fritsch, S., Barthelmebs, M. and Helwig, J.J. 2002. Transcript expression of the tuberoinfundibular peptide (TIP39)/PTH2 receptor system and non-PTH1 receptor-mediated tonic effects of TIP39 and other PTH2 receptor ligands in renal vessels. *Endocrinology* 143: 3036-3043.
4. Della Penna, K., Kinose, F., Sun, H., Koblan, K.S. and Wang, H. 2003. Tuberoinfundibular peptide of 39 residues (TIP39): molecular structure and activity for parathyroid hormone 2 receptor. *Neuropharmacology* 44: 141-153.

## CHROMOSOMAL LOCATION

Genetic locus: Pth2 (mouse) mapping to 7 B4.

## SOURCE

pro-TIP39 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal propeptide of TIP39 of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-22690 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

pro-TIP39 (G-19) is recommended for detection of TIP39 precursor of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with mature TIP39 peptide.

Suitable for use as control antibody for TIP39 siRNA (m): sc-154280, TIP39 shRNA Plasmid (m): sc-154280-SH and TIP39 shRNA (m) Lentiviral Particles: sc-154280-V.

Molecular Weight of pro-TIP39 precursor: 11 kDa.

Molecular Weight of mature pro-TIP39: 4 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.