



CGRP-RCP (P-13): sc-34590

BACKGROUND

Calcitonin is a 32 amino acid polypeptide hormone that preserves skeletal integrity and reduces blood calcium levels by decreasing osteoclast activity in bones, calcium and phosphate reabsorption by kidney tubules and calcium absorption by the intestines. The secretion of Calcitonin from the thyroid is regulated in part by estrogen, which increases Calcitonin mRNA levels. The Calcitonin gene, *CALCA*, undergoes tissue-specific RNA alternative splicing, resulting in the production of different mRNA transcripts. One transcript encodes procalcitonin as well as both calcium-lowering processed active polypeptides, Calcitonin and katecalcitonin. An alternative transcript of *CALCA* encodes the precursor for the neuropeptide referred to as Calcitonin gene-related peptide 1, also designated CGRP1 or α -CGRP. CGRP is a widely distributed vasodilatory peptide. Calcitonin and katecalcitonin are produced primarily in the thyroid, while CGRP is produced in neuronal cells. A second CGRP related gene, *CALCB*, thought to be derived from a gene duplication event, has been identified in mouse, rat and human. Unlike *CALCA*, *CALCB* is not subject to alternative splicing and encodes a single transcript designated CGRP2 or β -CGRP. Mature CGRP1 and CGRP2 share significant sequence identity at the protein level differing by only 1-3 amino acid residues, depending on the species.

REFERENCES

1. Naghashpour, M., et al. 1997. Inhibitory effect of Calcitonin gene-related peptide on myometrial contractility is diminished at parturition. *Endocrinology* 138: 4207-4214.
2. Balkan, W., et al. 1999. Testes exhibit elevated expression of Calcitonin gene-related peptide receptor component protein. *Endocrinology* 140: 1459-1469.
3. Evans, B.N., et al. 2000. CGRP-RCP, a novel protein required for signal transduction at Calcitonin gene-related peptide and adrenomedullin receptors. *J. Biol. Chem.* 275: 31438-31443.

CHROMOSOMAL LOCATION

Genetic locus: RCP9 (human) mapping to 7q11.21; *Crcp* (mouse) mapping to 5 G1.3.

SOURCE

CGRP-RCP (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CGRP-RCP 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.

Blocking peptide available for competition studies, sc-34590 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CGRP-RCP (P-13) is recommended for detection of CGRP-RCP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CGRP-RCP siRNA (h): sc-45539 and CGRP-RCP siRNA (m): sc-45540.

Molecular Weight of CYP4F2: 56 kDa.

Positive Controls: rat epididymus extract.

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.

RESEARCH USE

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

PROTOCOLS

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