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 katacalcin. 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 katacalcin are produced primarily in the thyroid, while CGRP is produced in neuronal cells. A second CGRP related gene, CALCB, thought to be derived from an 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

CHROMOSOMAL LOCATION
Genetic locus: CALCA/CALCB (human) mapping to 11p15.2; Calca/Calcb (mouse) mapping to 7 F1.

SOURCE
CGRP (4901) is a mouse monoclonal antibody raised against a CGRP of rat origin.

PRODUCT
Each vial contains 200 µg IgG1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

APPLICATIONS
CGRP (4901) is recommended for detection of CGRP1 and CGRP2 of mouse, rat, human and canine 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). Molecular Weight of proCGRP: 13 kDa. Molecular Weight of CGRP active form: 5 kDa. Positive Controls: rat testis extract: sc-2400 or rat epididymis extract: sc-364804.

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 or our catalog for detailed protocols and support products.