

CGRP (N-20): sc-8856

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.

CHROMOSOMAL LOCATION

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

SOURCE

CGRP (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CGRP 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-8856 P, (100 μ g 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

CGRP (N-20) is recommended for detection of CGRP1 and CGRP2 of mouse, rat and human 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).

CGRP (N-20) is also recommended for detection of CGRP1 and CGRP2 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of pro CGRP: 13 kDa.

Molecular Weight of CGRP active form: 5 kDa.

Positive Controls: mouse lung extract: sc-2390.

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.

SELECT PRODUCT CITATIONS

- Marvizón, J.C., et al. 2002. Two N-methyl-D-aspartate receptors in rat dorsal root ganglia with different subunit composition and localization. *J. Comp. Neurol.* 446: 325-341.
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- Ling, B., et al. 2007. Behavioral and immunohistological assessment of painful neuropathy induced by a single oxaliplatin injection in the rat. *Toxicology* 234: 176-184.
- Kishimoto, I., et al. 2008. C-type natriuretic peptide is a Schwann cell-derived factor for development and function of sensory neurones. *J. Neuroendocrinol.* 20: 1213-1223.
- Tang, H., et al. 2008. Angiotensin II type 1 receptors may not influence response of spinal autonomic neurons to axonal damage. *Neurol. Res.* 30: 751-760.
- Jornot, L., et al. 2008. Neuroendocrine cells of nasal mucosa are a cellular source of brain-derived neurotrophic factor. *Eur. Respir. J.* 32: 769-774.
- Niu, L., et al. 2009. Neurochemical phenotypes of endomorphin-2-containing neurons in vagal nodose neurons of the adult rat. *Neurochem. Int.* 55: 542-551.
- Coudore-Civiale, M.A., et al. 2010. Spinal Substance P and CGRP staining in vincristine, cisplatin, streptozocin or constriction injury-induced neuropathies. *J. Pharm. Sci. Res.* 2: 590-598.

STORAGE

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


 MONOS
 Satisfaction
 Guaranteed

Try **CGRP (4901): sc-57053** or **CGRP (026-05-1): sc-80468**, our highly recommended monoclonal alternatives to CGRP (N-20).