

CT-R (C-19): sc-8859

BACKGROUND

Calcitonin (CT) is a circulating peptide hormone that is secreted from the thyroid and specifically binds to surface calcitonin receptors (CT-R) to regulate calcium homeostasis. These receptors represent a distinct family of seven transmembrane proteins, which include receptors for parathyroid hormone/parathyroid-related peptide, secretin and glucagon. CT-Rs induce intracellular signaling by coupling to multiple heterotrimeric G proteins, where they then activate several signal transduction pathways involving adenylyl cyclase, phospholipase C and map kinases. The gene encoding CT-R consists of numerous exons separated by larger introns, which are modified to produce multiple splice variants. These functionally unique isoforms display differential tissue distribution and preferentially associate with specific G proteins to recruit distinct signaling intermediates. In osteoclasts and embryonic kidney cells, CT binding to the CT-R stimulates the map kinases Erk1/2 and PKC activity through the phosphorylation of the adaptor proteins Shc and HEF1, and this induction occurs independently from PKA and adenylyl cyclase mediated signaling.

CHROMOSOMAL LOCATION

Genetic locus: CALCR (human) mapping to 7q21.3.

SOURCE

CT-R (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of CT-R of human 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-8859 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

CT-R (C-19) is recommended for detection of CT-R 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 CT-R siRNA (h): sc-39908, CT-R shRNA Plasmid (h): sc-39908-SH and CT-R shRNA (h) Lentiviral Particles: sc-39908-V.

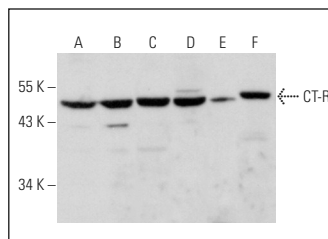
Molecular Weight of CT-R isoforms: 59/55/50/52/34/32 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, MDA-MB-231 cell lysate: sc-2232 or Caki-1 cell lysate: sc-2224.

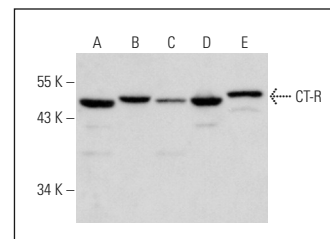
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CT-R (C-19): sc-8859. Western blot analysis of CT-R expression in MDA-MB-231 (A), MCF7 (B), Caki-1 (C) and HL-60 (D) whole cell lysates and mouse small intestine (E) and rat kidney (F) tissue extracts.



CT-R (C-19): sc-8859. Western blot analysis of CT-R expression in HEK293 (A), KNRK (B), HISM (C), LNCaP (D) and SH-SY5Y (E) whole cell lysates.

SELECT PRODUCT CITATIONS

- O'Gradaigh, D., et al. 2004. Joint erosion in rheumatoid arthritis: interactions between tumour necrosis factor- α , interleukin-1, and receptor activator of nuclear factor κ B ligand (RANKL) regulate osteoclasts. *Ann. Rheum. Dis.* 63: 354-359.
- McNally, A.K. and Anderson, J.M. 2011. Foreign body-type multinucleated giant cells induced by interleukin-4 express select lymphocyte co-stimulatory molecules and are phenotypically distinct from osteoclasts and dendritic cells. *Exp. Mol. Pathol.* 91: 673-681.

RESEARCH USE

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

PROTOCOLS

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

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Try **CT-R (2F7): sc-293299**, our highly recommended monoclonal alternative to CT-R (C-19).