

CGRP-RCP (D-1): sc-393347

BACKGROUND

Calcitonin is a 32-amino acid hormone that preserves skeletal integrity by inhibiting osteoclast formation and bone resorption. The secretion of calcitonin from the thyroid is regulated in part by estrogen, which increases calcitonin mRNA levels. The calcitonin gene undergoes alternative splicing, resulting in the production of several related products. One such product is calcitonin gene-related peptide (CGRP), which is expressed in neuronal cells. CGRP immunoreactive neurons innervate the uterus. Specifically, CGRP inhibits spontaneous and evoked contractions in the uterus and fallopian tubes. The CGRP-receptor complement protein (CGRP-RCP) is an accessory protein that is expressed in CGRP responsive tissues. CGRP-RCP is associated with the acrosome, thereby playing a role in reproduction. Specifically, CGRP-RCP couples the CGRP receptor to downstream effectors.

REFERENCES

1. Luebke, A.E., et al. 1996. Identification of a protein that confers calcitonin gene-related peptide responsiveness to oocytes by using a cystic fibrosis transmembrane conductance regulator assay. *Proc. Natl. Acad. Sci. USA* 93: 3455-3460.
2. Balkan, W., et al. 1999. Testes exhibit elevated expression of calcitonin gene-related peptide receptor component protein. *Endocrinology* 140: 1459-1469.
3. Sams, A., et al. 1999. Equipotent *in vitro* actions of α - and β -CGRP on guinea pig basilar artery are likely to be mediated via CRLR derived CGRP receptors. *Regul. Pept.* 85: 67-75.

CHROMOSOMAL LOCATION

Genetic locus: CRCP (human) mapping to 7q11.21; Crp (mouse) mapping to 5 G1.3.

SOURCE

CGRP-RCP (D-1) is a mouse monoclonal antibody raised against amino acids 1-148 representing full length CGRP-RCP of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CGRP-RCP (D-1) is available conjugated to agarose (sc-393347 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393347 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393347 PE), fluorescein (sc-393347 FITC), Alexa Fluor® 488 (sc-393347 AF488), Alexa Fluor® 546 (sc-393347 AF546), Alexa Fluor® 594 (sc-393347 AF594) or Alexa Fluor® 647 (sc-393347 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393347 AF680) or Alexa Fluor® 790 (sc-393347 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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 (D-1) is recommended for detection of CGRP-RCP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 CGRP-RCP siRNA (h): sc-45539, CGRP-RCP siRNA (m): sc-45540, CGRP-RCP shRNA Plasmid (h): sc-45539-SH, CGRP-RCP shRNA Plasmid (m): sc-45540-SH, CGRP-RCP shRNA (h) Lentiviral Particles: sc-45539-V and CGRP-RCP shRNA (m) Lentiviral Particles: sc-45540-V.

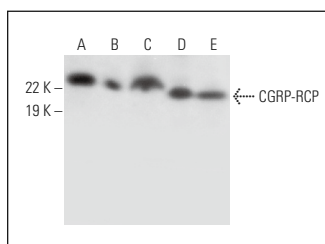
Molecular Weight of CGRP-RCP: 19 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, Hs 181 Tes whole cell lysate: sc-364779 or human testis extract: sc-363781.

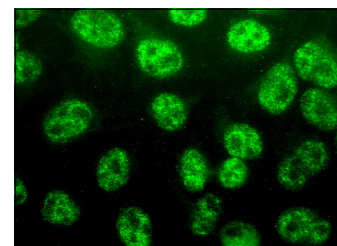
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CGRP-RCP (D-1): sc-393347. Western blot analysis of CGRP-RCP expression in NTERA-2 cl.D1 (A) and Hs 181 Tes (B) whole cell lysates and rat epididymis (C), mouse epididymus (D) and human testis (E) tissue extracts.



CGRP-RCP (D-1): sc-393347. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Vogler, B., et al. 2023. The anti-calcitonin gene-related peptide (anti-CGRP) antibody fremanezumab reduces trigeminal neurons immunoreactive to CGRP and CGRP receptor components in rats. *Int. J. Mol. Sci.* 24: 13471.

RESEARCH USE

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