

GCNF (B-2): sc-271733

BACKGROUND

Germ cell nuclear factor (GCNF) is an orphan member of the nuclear receptor gene superfamily that influences neurogenesis and germ cell development. GCNF can homodimerize and bind DNA. GCNF regulates paracrine interaction between the oocyte and somatic cells by regulating the expression of BMP-15 and GDF-9, to affect female fertility. GCNF is present in spermatocytes and round spermatids of adult male mouse testis; northern blot and ribonuclease protection assays have shown GCNF is predominant in the testis. The gene expresses three alternatively spliced transcript variants.

REFERENCES

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- Kapelle, M., et al. 1997. cDNA cloning of two closely related forms of human germ cell nuclear factor (GCNF). *Biochim. Biophys. Acta* 1352: 13-17.
- Agoulnik, I.Y., et al. 1998. Cloning, expression analysis and chromosomal localization of the human nuclear receptor gene GCNF. *FEBS Lett.* 424: 73-78.
- Bauer, U.M., et al. 1998. The murine nuclear orphan receptor GCNF is expressed in the XY body of primary spermatocytes. *FEBS Lett.* 439: 208-214.
- Charles, J.P., et al. 1999. Characterization and DNA-binding properties of GRF, a novel monomeric binding orphan receptor related to GCNF and β FTZ-F1. *Eur. J. Biochem.* 266: 181-190.
- Schöhl, A., et al. 2002. Oocytes and embryos of *Xenopus laevis* express two different isoforms of germ cell nuclear factor (GCNF, NR6A1). *Mech. Dev.* 118: 261-264.

CHROMOSOMAL LOCATION

Genetic locus: NR6A1 (human) mapping to 9q33.3; Nr6a1 (mouse) mapping to 2 B.

SOURCE

GCNF (B-2) is a mouse monoclonal antibody raised against amino acids 181-480 mapping at the C-terminus of GCNF of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-271733 X, 200 μ g/0.1 ml.

GCNF (B-2) is available conjugated to agarose (sc-271733 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271733 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271733 PE), fluorescein (sc-271733 FITC), Alexa Fluor® 488 (sc-271733 AF488), Alexa Fluor® 546 (sc-271733 AF546), Alexa Fluor® 594 (sc-271733 AF594) or Alexa Fluor® 647 (sc-271733 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271733 AF680) or Alexa Fluor® 790 (sc-271733 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

GCNF (B-2) is recommended for detection of GCNF 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).

GCNF (B-2) is also recommended for detection of GCNF in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GCNF siRNA (h): sc-43573, GCNF siRNA (m): sc-45761, GCNF shRNA Plasmid (h): sc-43573-SH, GCNF shRNA Plasmid (m): sc-45761-SH, GCNF shRNA (h) Lentiviral Particles: sc-43573-V and GCNF shRNA (m) Lentiviral Particles: sc-45761-V.

GCNF (B-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

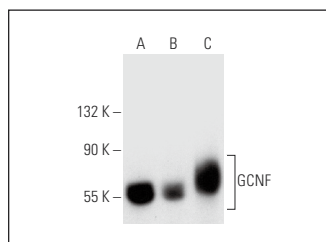
Molecular Weight of GCNF: 60 kDa.

Positive Controls: F9 cell lysate: sc-2245, K-562 whole cell lysate: sc-2203 or HEK293 whole cell lysate.

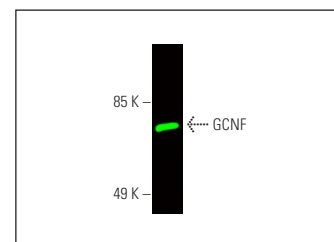
RECOMMENDED SUPPORT REAGENTS

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



GCNF (B-2): sc-271733. Western blot analysis of GCNF expression in HEK293 (A), K-562 (B) and F9 (C) whole cell lysates.



GCNF (B-2): sc-271733. Near-Infrared western blot analysis of GCNF expression in HEK293 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 680: sc-516180.

STORAGE

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

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