

# GDF-9B (H-83): sc-28911

## BACKGROUND

Growth/differentiation factors (GDFs) are members of the TGF superfamily. Members of the TGF superfamily are involved in embryonic development and adult tissue homeostasis. Growth and differentiation factor 9B (GDF-9B), also known as bone morphogenetic protein 15 (BMP15), is expressed exclusively in the oocyte. GDF-9B is closely related to GDF-9, another oocyte-specific member of this superfamily which has been shown to be essential for early ovarian folliculogenesis.

## REFERENCES

1. McPherron, A.C., et al. Regulation of skeletal muscle mass in mice by a new TGF $\beta$  superfamily member. *Nature* 387: 83-90.
2. Massagué, J. 1990. The transforming growth factor- $\beta$  family. *Annu. Rev. Cell Biol.* 6: 597-641.
3. Laitinen, M., et al. 1998. A novel growth differentiation factor-9 (GDF-9) related factor is co-expressed with GDF-9 in mouse oocytes during folliculogenesis. *Mech. Dev.* 78: 135-140.
4. Aaltonen, J., et al. 1999. Human growth differentiation factor 9 (GDF-9) and its novel homolog GDF-9B are expressed in oocytes during early folliculogenesis. *J. Clin. Endocrinol. Metab.* 84: 2744-2750.

## CHROMOSOMAL LOCATION

Genetic locus: BMP15 (human) mapping to Xp11.22; Bmp15 (mouse) mapping to X A1.1.

## SOURCE

GDF-9B (H-83) is a rabbit polyclonal antibody raised against amino acids 268-350 mapping near the C-terminus of GDF-9B of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

GDF-9B (H-83) is recommended for detection of mature and precursor GDF-9B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 GDF-9B siRNA (h): sc-39778, GDF-9B siRNA (m): sc-39779, GDF-9B shRNA Plasmid (h): sc-39778-SH, GDF-9B shRNA Plasmid (m): sc-39779-SH, GDF-9B shRNA (h) Lentiviral Particles: sc-39778-V and GDF-9B shRNA (m) Lentiviral Particles: sc-39779-V.

Molecular Weight of GDF-9B mature human doublet: 16/17 kDa.

Molecular Weight (predicted) of GDF-9B precursor: 45 kDa.

Molecular Weight (observed) of GDF-9B homodimer: 35 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Nicholls, P.K., et al. 2009. Growth differentiation factor 9 is a germ cell regulator of Sertoli cell function. *Endocrinology* 150: 2481-2490.
2. Paradis, F., et al. 2009. Temporal regulation of BMP2, BMP6, BMP15, GDF9, BMPR1A, BMPR1B, BMPR2 and TGFBR1 mRNA expression in the oocyte, granulosa and theca cells of developing preovulatory follicles in the pig. *Reproduction* 138: 115-129.
3. Sun, R.Z., et al. 2010. Expression of GDF-9, BMP-15 and their receptors in mammalian ovary follicles. *J. Mol. Histol.* 41: 325-332.
4. Gode, F., et al. 2011. Influence of follicular fluid GDF9 and BMP15 on embryo quality. *Fertil. Steril.* 95: 2274-2278.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **GDF-9B (F-7): sc-271824**, our highly recommended monoclonal alternative to GDF-9B (H-83).