

GDF-9B (A-20): sc-18337

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

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2. Massagué, J. 1990. The transforming growth factor- β 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.
5. Galloway, S.M., et al. 2000. Mutations in an oocyte-derived growth factor gene (BMP15) cause increased ovulation rate and infertility in a dosage-sensitive manner. *Nat. Genet.* 25: 279-283.
6. Takebayashi, K., et al. 2000. Mutation analysis of the growth differentiation factor-9 and -9B genes in patients with premature ovarian failure and polycystic ovary syndrome. *Fertil. Steril.* 74: 976-979.
7. Galloway, S.M., et al. 2002. Bmp15 mutations and ovarian function. *Mol. Cell. Endocrinol.* 191: 15-18.

CHROMOSOMAL LOCATION

Genetic locus: BMP15 (human) mapping to Xp11.22.

SOURCE

GDF-9B (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GDF-9B 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-18337 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

GDF-9B (A-20) is recommended for detection of GDF-9B of 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).

Suitable for use as control antibody for GDF-9B siRNA (h): sc-39778, GDF-9B shRNA Plasmid (h): sc-39778-SH and GDF-9B shRNA (h) Lentiviral Particles: sc-39778-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 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

1. Hanavadi, S., et al. 2007. The role of growth differentiation factor-9 (GDF-9) and its analog, GDF-9b/BMP-15, in human breast cancer. *Ann. Surg. Oncol.* 14: 2159-2166.
2. Margulis, S., et al. 2009. Bone morphogenetic protein 15 expression in human ovaries from fetuses, girls, and women. *Fertil. Steril.* 92: 1666-1673.
3. Kedem, A., et al. 2011. Growth differentiating factor 9 (GDF9) and bone morphogenetic protein 15 both activate development of human primordial follicles *in vitro*, with seemingly more beneficial effects of GDF9. *J. Clin. Endocrinol. Metab.* 96: E1246-E1254.

PROTOCOLS

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



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Try **GDF-9B (F-7): sc-271824**, our highly recommended monoclonal alternative to GDF-9B (A-20).