SANTA CRUZ BIOTECHNOLOGY, INC.

GDF-9 (C-18): sc-12244

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. GDF-1 expression is almost exclusively restricted to the central nervous system and mediates cell differentiation events during embryonic development. Neither GDF-3 (Vgr-2) nor GDF-9 contains the conserved cysteine residue which is found in most other TGF superfamily members. GDF-3 is detectable in bone marrow, spleen, thymus and adipose tissue, whereas GDF-9 has been detected in ovary and is required for ovarian folliculogenesis. GDF-5 (also designated CDMP-1) has been shown to induce activation of plasminogen activator, thereby inducing angiogenesis. It is predominantly expressed in long bones during fetal embryonic development and is involved in bone formation. GDF-5 mutations have been identified in mice with the mutation brachypodism (bp), a mutation which affects the length and number of bones in limbs. GDF-6 and GDF-7 are closely related to GDF-5. GDF-8 has been shown to be a negative regulator of skeletal muscle mass.

CHROMOSOMAL LOCATION

Genetic locus: GDF9 (human) mapping to 5q31.1; Gdf9 (mouse) mapping to 11 B1.3.

SOURCE

GDF-9 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GDF-9 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-12244 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GDF-9 (C-18) is recommended for detection of GDF-9 of mouse, rat and 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). GDF-9 (C-18) is also recommended for detection of GDF-9 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GDF-9 siRNA (h): sc-39776, GDF-9 siRNA (m): sc-39777, GDF-9 shRNA Plasmid (h): sc-39776-SH, GDF-9 shRNA Plasmid (m): sc-39777-SH, GDF-9 shRNA (h) Lentiviral Particles: sc-39776-V and GDF-9 shRNA (m) Lentiviral Particles: sc-39777-V.

Molecular Weight of GDF-9: 57 kDa.

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.

SELECT PRODUCT CITATIONS

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3. Huang, H.Y., et al. 2009. Granulosa-lutein cell growth differentiation factor-9 (GDF-9) messenger RNA and protein expression in *in vitro* fertilization (IVF) cycles: relation to characteristics of ovulation induction and IVF. Fertil. Steril. 91: 1583-1585.
4. Nicholls, P.K., et al. 2009. Growth differentiation factor-9 is a germ cell regulator of Sertoli cell function. Endocrinology 150: 2481-2490.
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6. Bokobza, S.M., et al. 2010. GDF-9 promotes the growth of prostate cancer cells by protecting them from apoptosis. J. Cell. Physiol. 225: 529-536.
7. Bokobza, S.M., et al. 2010. The growth and differentiation factor-9 promotes adhesive and motile capacity of prostate cancer cells by up-regulating FAK and paxillin via smad dependent pathway. Oncol. Rep. 24: 1653-1659.
8. 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.
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10. David, A., et al. 2011. Immunohistochemical localization of growth factors after cryopreservation and 3 weeks' xenotransplantation of human ovarian tissue. Fertil. Steril. 95: 1241-1246.
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12. Du, P., et al. 2012. Loss of expression of growth differentiation factor-9 (GDF9) in human kidney cancer and regulation of growth and migration of kidney cancer cells by GDF9. Anticancer Res. 32: 4375-4383.
13. Evron, A., et al. 2012. Human amniotic epithelial cells differentiate into cells expressing germ cell specific markers when cultured in medium containing serum substitute supplement. Reprod. Biol. Endocrinol. 10: 108.