SANTA CRUZ BIOTECHNOLOGY, INC.

GDF-7 (N-16): sc-6903

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 only been detected in ovary. 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.

REFERENCES

1. Massague, J. 1990. The transforming growth factor-β family. Ann. Rev. Cell Biol. 6: 597-641.
2. Lee, S.J. 1991. Expression of growth/differentiation factor 1 in the nervous system: conservation of a bicistronic structure. Proc. Natl. Acad. Sci. USA 88: 4250-4254.
3. McPherron, A.C., et al. 1993. GDF-3 and GDF-9: two new members of the transforming growth factor-β superfamily containing a novel pattern of cysteines. J. Biol. Chem. 268: 3444-3449.
4. Storm, E.E., et al. 1994. Limb alterations in brachypodism mice due to mutations in a new member of the TGF-β superfamily. Nature 368: 639-643.
5. Yamashita, H., et al. 1997. Growth differentiation factor-5 induces angiogenesis *in vivo*. Exp. Cell Res. 235: 218-226.
6. McPherron, A.C., et al. 1997. Regulation of skeletal muscle mass in mice by a new TGF-β superfamily member. Nature 387: 83-90.

SOURCE

GDF-7 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GDF-7 of mouse 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-6903 P, (100 µg 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-7 (N-16) is recommended for detection of precursor and mature GDF-7 of mouse and rat 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-7 siRNA (m): sc-39773, GDF-7 shRNA Plasmid (m): sc-39773-SH and GDF-7 shRNA (m) Lentiviral Particles: sc-39773-V.

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.

PROTOCOLS

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