

GDF-10 (N-19): sc-130144

BACKGROUND

Growth/differentiation factors (GDFs) are members of the TGF superfamily whose members are involved in embryonic development and adult tissue homeostasis. GDF-10 (growth differentiation factor 10), also known as BMP3B (bone morphogenetic protein 3B) or BIP, is a 478 amino acid secreted protein that belongs to the TGF superfamily. Expressed in lung, femur, brain, testis, pancreas and skeletal muscle, GDF-10 exists as a homodimer or a heterodimer that, characteristic of BMP proteins, contains a polybasic proteolytic processing site which is cleaved to produce a mature protein containing seven conserved cysteine residues. GDF-10 is thought to play a role in cell growth and differentiation and may be involved in skeletal morphogenesis.

REFERENCES

1. Cunningham, N.S., et al. 1995. Growth/differentiation factor-10: a new member of the transforming growth factor- β superfamily related to bone morphogenetic protein-3. *Growth Factors* 12: 99-109.
2. Hino, J., et al. 1996. cDNA cloning and genomic structure of human bone morphogenetic protein 3B (BMP3B). *Biochem. Biophys. Res. Commun.* 223: 304-310.
3. Ducky, P. and Karsenty, G. 2000. The family of bone morphogenetic proteins. *Kidney Int.* 57: 2207-2214.
4. Cho, T.J., et al. 2002. Differential temporal expression of members of the transforming growth factor β superfamily during murine fracture healing. *J. Bone Miner. Res.* 17: 513-520.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 601361. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Aldred, M.A., et al. 2003. Caveolin-1 and caveolin-2, together with three bone morphogenetic protein-related genes, may encode novel tumor suppressors downregulated in sporadic follicular thyroid carcinogenesis. *Cancer Res.* 63: 2864-2871.
7. Cagnard, N., et al. 2005. Interleukin-32, CCL2, PF4F1 and GDF10 are the only cytokine/chemokine genes differentially expressed by *in vitro* cultured rheumatoid and osteoarthritis fibroblast-like synoviocytes. *Eur. Cytokine Netw.* 16: 289-292.
8. Katoh, Y. and Katoh, M. 2006. Comparative integromics on BMP/GDF family. *Int. J. Mol. Med.* 17: 951-955.

CHROMOSOMAL LOCATION

Genetic locus: GDF10 (human) mapping to 10q11.22.

STORAGE

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

PROTOCOLS

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

SOURCE

GDF-10 (N-19) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of GDF-10 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GDF-10 (N-19) is recommended for detection of GDF-10 of human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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-10 siRNA (h): sc-90476, GDF-10 shRNA Plasmid (h): sc-90476-SH and GDF-10 shRNA (h) Lentiviral Particles: sc-90476-V.

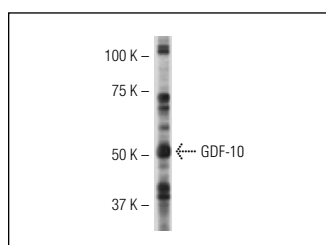
Molecular Weight of GDF-10: 52 kDa.

Positive Controls: A375 whole cell lysate: sc-3811.

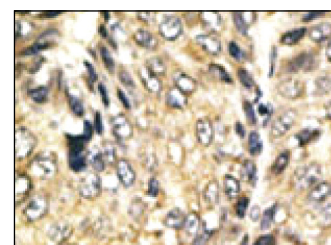
RECOMMENDED SECONDARY REAGENTS

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[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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) 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[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



GDF-10 (N-19): sc-130144. Western blot analysis of GDF-10 expression in A375 whole cell lysate.



GDF-10 (N-19): sc-130144. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cancer tissue showing cytoplasmic staining.

RESEARCH USE

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