



## GDF-1 (P-20): sc-27412

### BACKGROUND

Growth/differentiation factors (GDFs) are members of the TGF $\beta$  superfamily. Members of the TGF $\beta$  superfamily are involved in embryonic development and adult tissue homeostasis. GDF-1 expression is almost exclusively restricted to the central nervous system, most strongly expressed in the hippocampus and cortex of the brain. The function of GDF-1 is not completely known, however, it may mediate cell differentiation events during embryonic development.

### REFERENCES

1. Massague, J. 1990. The transforming growth factor  $\beta$  family. *Ann. Rev. Cell. Biol.* 6: 597-641.
2. Lee, S.J. 1990. Identification of a novel member (GDF-1) of the transforming growth factor  $\beta$  superfamily. *Mol. Endocrinol.* 4: 1034-1040.
3. 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.
4. McPherron, A.C., et al. 1997. Regulation of skeletal muscle mass in mice by a new TGF $\beta$  superfamily member. *Nature* 387: 83-90.
5. Ebendal, T., et al. 1998. Bone morphogenetic proteins and their receptors: potential functions in the brain. *J. Neurosci. Res.* 51: 139-146.
6. Soderstrom, S., et al. 1999. Localized expression of BMP and GDF mRNA in the rodent brain. *J. Neurosci. Res.* 56: 482-492.
7. Rankin, C.T., et al. 2000. Regulation of left-right patterning in mice by growth/differentiation factor-1. *Nat. Genet.* 24: 262-265.

### CHROMOSOMAL LOCATION

Genetic locus: GDF1 (human) mapping to 19p12; Gdf1 (mouse) mapping to 8 B3.3.

### SOURCE

GDF-1 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GDF-1 of mouse origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-27412 P, (100  $\mu$ 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-1 (P-20) is recommended for detection of precursor and mature GDF-1 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-1 siRNA (m): sc-39765.

Molecular Weight of GDF-1: 40 kDa.

### 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 Blotting 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](http://www.scbt.com) or our catalog for detailed protocols and support products.