

GDF-15 (FL-308): sc-66904

BACKGROUND

Growth differentiation factor 15 (GDF-15), also known as PDF, MIC-1, PLAB, NAG-1 or PTGF- β , is a member of the transforming growth factor β (TGF β) superfamily. Synthesized intracellularly, the protein is secreted as a dimer linked by disulfide bonds. Epithelial cells and macrophages are the sites of strongest GDF-15 expression, although it is widely expressed in adult tissue. In the brain, GDF-15 expression occurs in the choroid plexus, from which the protein is secreted into the cerebrospinal fluid. The gene for GDF-15 is responsive to p53 tumor suppressor protein, and in cultured cerebellar granule neurons GDF-15 can prevent cell death by the activation of Akt and inhibition of ERK. GDF-15 acts as a trophic factor for certain classes of neurons, promoting cell survival and differentiation. Overexpression of GDF-15 occurs in prostate cancer, and may be a means of diagnosis. In the uterus, GDF-15 may work to suppress maternally derived proinflammatory cytokines, thereby promoting fetal survival.

REFERENCES

1. Fairlie, W.D., et al. 1999. MIC-1 is a novel TGF β superfamily cytokine associated with macrophage activation. *J. Leukoc. Biol.* 65: 2-5.
2. Bottner, M., et al. 1999. Expression of a novel member of the TGF β superfamily, growth/differentiation factor-15/macrophage-inhibiting cytokine-1 (GDF-15/MIC-1) in adult rat tissues. *Cell Tissue Res.* 297: 103-110.
3. Strelau, J., et al. 2000. GDF-15/MIC-1 a novel member of the TGF β superfamily. *J. Neural Transm. Suppl.* 60: 273-276.
4. Bauskin, A.R., et al. 2000. The propeptide of macrophage inhibitory cytokine (MIC-1), a TGF β superfamily member, acts as a quality control determinant for correctly folded MIC-1. *EMBO J.* 19: 2212-2220.
5. Kim, K.S., et al. 2002. Expression and regulation of nonsteroidal anti-inflammatory drug-activated gene (NAG-1) in human and mouse tissue. *Gastroenterology* 122: 1388-1398.
6. Kriegstein, K., et al. 2002. TGF β and the regulation of neuron survival and death. *J. Physiol.* 96: 25-30.

CHROMOSOMAL LOCATION

Genetic locus: GDF15 (human) mapping to 19p13.11.

SOURCE

GDF-15 (FL-308) is a rabbit polyclonal antibody raised against amino acids 1-308 representing full length GDF-15 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.

STORAGE

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

APPLICATIONS

GDF-15 (FL-308) is recommended for detection of precursor and mature GDF-15 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).

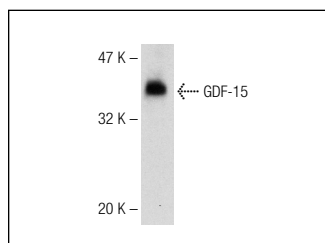
Suitable for use as control antibody for GDF-15 siRNA (h): sc-39798, GDF-15 shRNA Plasmid (h): sc-39798-SH and GDF-15 shRNA (h) Lentiviral Particles: sc-39798-V.

Molecular Weight of GDF-15 precursor: 40 kDa.

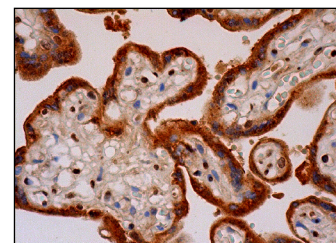
Molecular Weight of mature GDF-15: 30 kDa.

Positive Controls: LNCaP cell lysate: sc-2231.

DATA



GDF-15 (FL-308): sc-66904. Western blot analysis of GDF-15 expression in LNCaP whole cell lysate.



GDF-15 (FL-308): sc-66904. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

RESEARCH USE

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

PROTOCOLS

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

MONOS
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Try **GDF-15 (G-5): sc-377195** or **GDF-15 (ME-6D10): sc-101379**, our highly recommended monoclonal alternatives to GDF-15 (FL-308).