

GDF-8/11 (F-13): sc-34781

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-8, also known as myostatin, has been shown to be a negative regulator of skeletal muscle growth. GDF-11 has been shown to control anterior/posterior patterning of the axial skeleton, and also regulates kidney and pancreas organogenesis. GDF-11 controls anterior/posterior patterning of the axial skeleton, regulates organogenesis by controlling the expression of GDNF, contributes to the control of HOX gene expression and induces phosphorylation of Smad2. In addition, GDF-11 mediates signaling of Nodal during left-right patterning and development of head structures and inhibits generation of new neurons by neuronal progenitors in the olfactory epithelium.

CHROMOSOMAL LOCATION

Genetic locus: MSTN (human) mapping to 2q32.2, GDF11 (human) mapping to 12q13.2; Mstn (mouse) mapping to 1 C1.1, Gdf11 (mouse) mapping to 10 D3.

SOURCE

GDF-8/11 (F-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GDF-8 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-34781 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.

APPLICATIONS

GDF-8/11 (F-13) is recommended for detection of precursor and mature GDF-8 and GDF-11 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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-8/11 (F-13) is also recommended for detection of precursor and mature GDF-8 and GDF-11 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of GDF-8 precursor: 52 kDa.

Molecular Weight of mature GDF-8: 26 kDa.

Molecular Weight of GDF-11 precursor: 50 kDa.

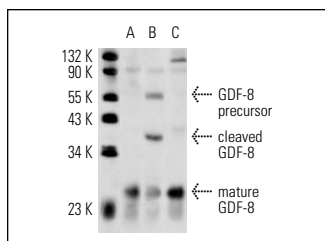
Molecular Weight of mature GDF-11: 12.5 kDa.

Positive Controls: rat brain extract: sc-2392, rat skeletal muscle extract: sc-364810 or mouse embryo extract: sc-364239.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



GDF-8/11 (F-13): sc-34781. Western blot analysis of GDF-8 expression in mouse embryo (A), rat skeletal muscle (B) and rat brain (C) tissue extracts.

SELECT PRODUCT CITATIONS

- Amirouche, A., et al. 2009. Down-regulation of Akt/mammalian target of rapamycin signaling pathway in response to myostatin overexpression in skeletal muscle. *Endocrinology* 150: 286-294.
- Peiris, H.N., et al. 2010. Brief communication: sexual dimorphic expression of myostatin and follistatin like-3 in a rat *trans*-generational under-nutrition model. *Nutr. Metab.* 7: 44.
- Peiris, H.N., et al. 2010. Placental expression of myostatin and follistatin-like-3 protein in a model of developmental programming. *Am. J. Physiol. Endocrinol. Metab.* 298: E854-E861.

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.



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Try **GDF-8/11 (A-1): sc-398333** or **GDF-8/11 (H-9): sc-393335**, our highly recommended monoclonal alternatives to GDF-8/11 (F-13).