

# GDF-8/11 (A-1): sc-398333

## 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 (A-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 258-270 within an internal region of GDF-8 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398333 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

GDF-8/11 (A-1) is recommended for detection of precursor and mature GDF-8 and GDF-11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (A-1) 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.

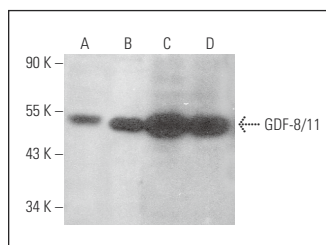
Molecular Weight of mature GDF-11: 13 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or mouse brain extract: sc-2253.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



GDF-8/11 (A-1): sc-398333. Western blot analysis of GDF-8/11 expression in K-562 (A) and HeLa (B) whole cell lysates and mouse brain (C) and rat brain (D) tissue extracts.

## SELECT PRODUCT CITATIONS

1. Crispo, M., et al. 2015. Efficient generation of myostatin knock-out sheep using CRISPR/Cas9 technology and microinjection into zygotes. *PLoS ONE* 10: e0136690.
2. Amirouche, A., et al. 2017. Muscle-specific microRNA-206 targets multiple components in dystrophic skeletal muscle representing beneficial adaptations. *Am. J. Physiol., Cell Physiol.* 312: C209-C221.
3. Zhang, W., et al. 2018. MiR-27b promotes sheep skeletal muscle satellite cell proliferation by targeting myostatin gene. *J. Genet.* 97: 1107-1117.
4. Wijaya, Y.T., et al. 2021. Amelioration of muscle wasting by gintonin in cancer cachexia. *Neoplasia* 23: 1307-1317.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.