

GDF-11 (X-19): sc-81952

BACKGROUND

GDF-11, a member of the transforming growth factor β (TGF β) superfamily, controls anterior/posterior patterning of the axial skeleton, regulates organogenesis by controlling 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.

REFERENCES

- Gad, J.M. and Tam, P.P. 1999. Axis development: the mouse become daschund. *Curr. Biol.* 9: R783-R786.
- McPherron, A.C., et al. 1999. Regulation of anterior/posterior patterning of the axial skeleton by growth/differentiation factor 11. *Nat. Genet.* 22: 260-264.
- Liu, J.P., et al. 2001. Assigning the positional identity of spinal motor neurons: rostrocaudal patterning of Hox-c expression by FGFs, GDF-11 and retinoids. *Neuron* 32: 997-1012.
- Gamer, L.W., et al. 2001. GDF-11 is a negative regulator of chondrogenesis and myogenesis in the developing chick limb. *Dev. Biol.* 229: 407-420.

CHROMOSOMAL LOCATION

Genetic locus: GDF11 (human) mapping to 12q13.2; Gdf11 (mouse) mapping to 10 D3.

SOURCE

GDF-11 (X-19) is a mouse monoclonal antibody raised against recombinant GDF-11 of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GDF-11 (X-19) is recommended for detection of GDF-11 of mouse, rat and 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GDF-11 siRNA (h): sc-44724, GDF-11 siRNA (m): sc-44725, GDF-11 shRNA Plasmid (h): sc-44724-SH, GDF-11 shRNA Plasmid (m): sc-44725-SH, GDF-11 shRNA (h) Lentiviral Particles: sc-44724-V and GDF-11 shRNA (m) Lentiviral Particles: sc-44725-V.

Molecular Weight of GDF-11 precursor: 50 kDa.

Molecular Weight of mature GDF-11: 13 kDa.

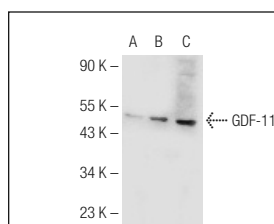
Molecular Weight of GDF-11 cleaved prodomain: 37 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, SW480 cell lysate: sc-2219 or GDF-11 (m): 293 Lysate: sc-178664.

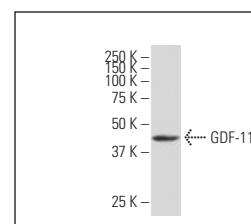
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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).

DATA



GDF-11 (X-19): sc-81952. Western blot analysis of GDF-11 expression in non-transfected 293: sc-110760 (A), mouse GDF-11 transfected 293: sc-178664 (B) and SW480 (C) whole cell lysates.



GDF-11 (X-19): sc-81952. Western blot analysis of GDF-11 expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

- Zhou, Y., et al. 2018. Late-onset administration of GDF-11 extends life span and delays development of age-related markers in the annual fish *Nothobranchius guentheri*. *Biogerontology* 20: 225-239.
- Zhou, Y., et al. 2019. Administration of rGDF-11 retards the aging process in male mice via action of anti-oxidant system. *Biogerontology* 20: 433-443.
- Zhu, J., et al. 2020. Role of Smad3 inhibitor and the pyroptosis pathway in spinal cord injury. *Exp. Ther. Med.* 20: 1675-1681.
- Song, L., et al. 2022. Dietary intake of GDF11 delays the onset of several biomarkers of aging in male mice through anti-oxidant system via Smad2/3 pathway. *Biogerontology* 23: 341-362.
- Andrianova, N.V., et al. 2022. Calorie restriction provides kidney ischemic tolerance in senescence-accelerated OXYS rats. *Int. J. Mol. Sci.* 23: 15224.

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.



See **GDF-8/11 (H-9): sc-393335** for GDF-8/11 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.