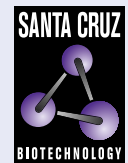


GDF-8 (1L4): sc-134345



The Power to Question

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-1 expression is almost exclusively restricted to the central nervous system and mediates cell differentiation events during embryonic development. Neither GDF-3 (Vgr-2) nor GDF-9 contains the conserved cysteine residue which is found in most other TGF superfamily members. GDF-3 is detectable in bone marrow, spleen, thymus and adipose tissue, whereas GDF-9 has only been detected in ovary. GDF-5 (also designated CDMP-1) has been shown to induce activation of plasminogen activator, thereby inducing angiogenesis. It is predominantly expressed in long bones during fetal embryonic development and is involved in bone formation. GDF-5 mutations have been identified in mice with the mutation brachypodism (bp), a mutation which affects the length and number of bones in limbs. GDF-6 and GDF-7 are closely related to GDF-5. GDF-8 has been shown to be a negative regulator of skeletal muscle growth.

CHROMOSOMAL LOCATION

Genetic locus: MSTN (human) mapping to 2q32.2; Mstn (mouse) mapping to 1 C1.1.

SOURCE

GDF-8 (1L4) is a mouse monoclonal antibody raised against recombinant GDF-8 protein of human origin.

PRODUCT

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

APPLICATIONS

GDF-8 (1L4) is recommended for detection of GDF-8 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GDF-8 siRNA (h): sc-39774, GDF-8 siRNA (m): sc-39775, GDF-8 shRNA Plasmid (h): sc-39774-SH, GDF-8 shRNA Plasmid (m): sc-39775-SH, GDF-8 shRNA (h) Lentiviral Particles: sc-39774-V and GDF-8 shRNA (m) Lentiviral Particles: sc-39775-V.

Molecular Weight of GDF-8 precursor: 52 kDa.

Molecular Weight of mature GDF-8: 26 kDa.

Positive Controls: LNCaP cell lysate: sc-2231 or human GDF-8 transfected 293T whole cell lysate.

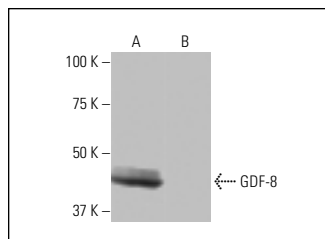
STORAGE

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

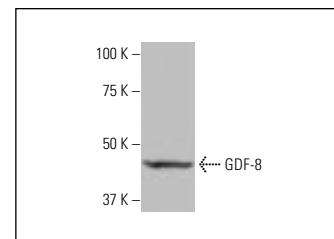
RESEARCH USE

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

DATA



GDF-8 (1L4): sc-134345. Western blot analysis of GDF-8 expression in human GDF-8 transfected (A) and non-transfected (B) 293T whole cell lysates.



GDF-8 (1L4): sc-134345. Western blot analysis of GDF-8 expression in LNCaP whole cell lysate.

SELECT PRODUCT CITATIONS

1. Zhao, J.X., et al. 2016. Different dietary energy intake affects skeletal muscle development through an Akt-dependent pathway in Dorper × Small Thin-Tailed crossbred ewe lambs. *Domest. Anim. Endocrinol.* 57: 63-70.
2. Gao, L., et al. 2019. Mstn knockdown decreases the *trans*-differentiation from myocytes to adipocytes by reducing JMJD3 expression via the Smad2/Smad3 complex. *Biosci. Biotechnol. Biochem.* 83: 2090-2096.
3. Gao, L., et al. 2020. MSTN mutant promotes myogenic differentiation by increasing demethylase TET1 expression via the Smad2/Smad3 pathway. *Int. J. Biol. Sci.* 16: 1324-1334.
4. Li, X., et al. 2022. Skeletal muscle mass, meat quality and antioxidant status in growing lambs supplemented with guanidinoacetic acid. *Meat Sci.* 192: 108906.
5. Song, P., et al. 2023. Vitamin A injection at birth improves muscle growth in lambs. *Anim. Nutr.* 14: 204-212.
6. Reed, C.H., et al. 2024. The influence of stress and binge-patterned alcohol drinking on mouse skeletal muscle protein synthesis and degradation pathways. *Biomolecules* 14: 527.
7. Yang, M.H., et al. 2024. Brassinin alleviates cancer cachexia by suppressing diverse inflammatory mechanisms in mice. *MedComm* 5: e558.
8. Jun, L., et al. 2024. Targeting molecular mechanisms of obesity- and type 2 diabetes mellitus-induced skeletal muscle atrophy with nerve growth factor. *Int. J. Mol. Sci.* 25: 4307.
9. Lee, J.A., et al. 2024. Whey peptide alleviates muscle atrophy by strongly regulating myocyte differentiation in mice. *Medicina* 60: 433.



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.