

GDF-8 (hBA-110): sc-4937

BACKGROUND

Growth/differentiation factors (GDFs) are members of the TGF β superfamily. Members of the TGF β superfamily are involved in embryonic development and adult tissue homeostasis. GDF-1 expression is almost exclusively restricted to the central nervous system. Neither GDF-3 (Vgr-2) nor GDF-9 contains the conserved cysteine residue which is found in most other TGF β superfamily members. GDF-3 is detectable in bone marrow, spleen, thymus and adipose tissue, whereas GDF-8 has only been detected in ovary. GDF-5 (also designated CDMP-1) has been shown to induce activation of plasminogen activator, thereby inducing angiogenesis. 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 mass.

REFERENCES

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2. Lee, S.J. 1991. Expression of growth/differentiation factor 1 in the nervous system: conservation of a bicistronic structure. *Proc. Natl. Acad. Sci. USA* 88: 4250-4254.
3. McPherron, A.C. and Lee, S.J. 1993. GDF-3 and GDF-9: two new members of the transforming growth factor β superfamily containing a novel pattern of cysteines. *J. Biol. Chem.* 268: 3444-3449.
4. Storm, E.E., Huynh, T.V., Copeland, N.G., Jenkins, N.A., Kingsley, D.M. and Lee, S.J. 1994. Limb alterations in brachypodism mice due to mutations in a new member of the TGF β superfamily. *Nature* 368: 639-643.
5. Yamashita, H., Shimizu, A., Kato, M., Nishitoh, H., Ichijo, H., Hanyu, A., Morita, I., Kimura, M., Makishima, F. and Miyazono, K. 1997. Growth differentiation factor-5 induces angiogenesis *in vivo*. *Exp. Cell Res.* 235: 218-226.
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CHROMOSOMAL LOCATION

Genetic locus: GDF8 (human) mapping to 2q32.2; Gdf8 (mouse) mapping to 1 C1.1.

SOURCE

GDF-8 (hBA-110) is produced in *E. coli* as a 39 kDa biologically active, tagged fusion protein corresponding to 109 amino acids of GDF-8 of human origin.

PRODUCT

GDF-8 (hBA-110) is purified from bacterial lysates (>98%); supplied as 50 μ g purified protein.

RESEARCH USE

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

RECONSTITUTION

In order to avoid freeze/thaw damaging of the active protein, dilute protein when first used to desired working concentration. Either a sterile filtered standard buffer (such as 50mM TRIS or 1X PBS) or water can be used for the dilution. Store any thawed aliquot in refrigeration at 2° C to 8° C for up to four weeks, and any frozen aliquot at -20° C to -80° C for up to one year. It is recommended that frozen aliquots be given an amount of standard cryopreservative (such as Ethylene Glycol or Glycerol 5-20% v/v), and refrigerated samples be given an amount of carrier protein (such as heat inactivated FBS or BSA to 0.1% v/v) or non-ionic detergent (such as Triton X-100 or Tween 20 to 0.005% v/v), to aid stability during storage.

STORAGE

Store desiccated at -20° C; stable for one year from the date of shipment.

PROTOCOLS

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