Human/Mouse GDF-11/BMP-11 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1958

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse GDF-11/BMP-11 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human/mouse/rat GDF-8/Myostatin and less than 1% cross-reactivity with recombinant human BMP-6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human GDF-11/BMP-11 Asn299-Ser407 Accession # O95390
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

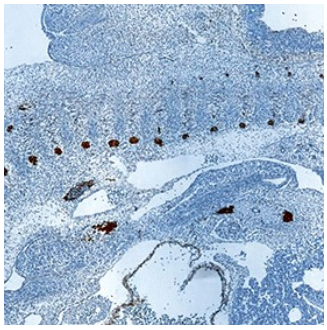
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



GDF-11/BMP-11 in Mouse Embryo. GDF-11/BMP-11 was detected in immersion fixed frozen sections of mouse embryo (11 d.p.c.) using Goat Anti-Human/Mouse GDF-11/BMP-11 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1958) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to dorsal root ganglia. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human/Mouse GDF-11/BMP-11 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1958

BACKGROUND

Growth Differentiation Factor 11 (GDF-11), also known as BMP-11, is a member of the TGF-β superfamily and is highly related to GDF-8. GDF-11 encodes a 407 amino acid (aa) prepropeptide which contains a signal sequence for secretion and an RXXR proteolytic processing site to yield a 109 aa residue carboxy-terminal mature protein (1). Mature GDF-11 contains the canonical 7-cysteine motif common to other TGF-β superfamily members; however, like the TGF-βs, Activins and GDF-8, GDF-11 also contains one extra pair of cysteine residues. At the amino acid sequence level, mature human, mouse, rat and chicken GDF-11 are 99-100% identical. GDF-11 and GDF-8 share 90% amino acid sequence identity within the mature protein. As detected by in situ hybridization, GDF-11 is expressed in diverse regions of the mouse embryo: tailbud, somitic precursors, limbs, mandibular and branchial arches, dorsal neural tube, odontoblasts, nasal epithelium, and particular regions of the brain (1, 2). Likewise, a targeted deletion of GDF-11 in mice results in a spectrum of abnormalities including palatal malformation, vertebral defects, elongated trunks with a reduced or absent tail, missing or malformed kidneys, and an increased number of neurons in the olfactory epithelium (2-5). An intriguing finding in the knockout mice was that the trunk elongation was due to an increase in the number of thoracic vertebrae (4). This implicates GDF-11 as the first secreted factor to influence the specification of segmental identity in vertebrates (3). In fact, GDF-11 does regulate expression of segmental transcription factors, the Hox genes (6). GDF-11 signals through the Activin type II receptors and induces phosphorylation of Smad2 to mediate axial patterning (7). Despite the strong expression in the limb throughout development, no limb abnormalities were found in the knockout mice. However, in vitro micromass studies indicate that GDF-11 inhibits myogenic and chondrogenic cell differentiation and may impact formation and development of the limb skeleton (6).

References:

1. Gamer, L.W. et al. (1999) Dev. Biol. 208: 222.
2. Nakashima, M. et al. (1999) Mech. Dev. 80:185.
3. Gad, J.M. and P.P.L. Tam (1999) Curr. Biol. 9:R783.
4. McPherron, A.C. et al. (1999) Nat. Genet. 22:260.
5. Esquela, A.F. and S.J. Lee (2003) Dev. Biol. 257:356.
6. Gamer, L.W. et al. (2001) Dev. Biol. 229:407.
7. Oh, S.P. et al. (2002) Genes & Dev. 16:274.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449