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GDF6 Antibody

Catalog # ASC10726

Product Information

Application	WB, E
Primary Accession	Q6KF10
Other Accession	NP_001001557, 48475062
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	50662
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	GDF6 antibody can be used for detection of GDF6 by Western blot at 0.5 to 1 g/mL.

Additional Information

Gene ID	392255
Other Names	Growth/differentiation factor 6, GDF-6, Bone morphogenetic protein 13, BMP-13, Growth/differentiation factor 16, GDF6, BMP13, GDF16
Target/Specificity	GDF6;
Reconstitution & Storage	GDF6 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	GDF6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GDF6
Synonyms	BMP13, GDF16
Function	Growth factor that controls proliferation and cellular differentiation in the retina and bone formation. Plays a key role in regulating apoptosis during retinal development. Establishes dorsal- ventral positional information in the retina and controls the formation of the retinotectal map (PubMed:23307924). Required for normal formation of bones and joints in the limbs, skull, digits and axial skeleton. Plays a key role in establishing boundaries between skeletal elements during development. Regulation of GDF6 expression seems to be a mechanism for evolving species-specific

changes in skeletal structures. Seems to positively regulate differentiation of chondrogenic tissue through the growth factor receptors subunits BMPR1A, BMPR1B, BMPR2 and ACVR2A, leading to the activation of SMAD1-SMAD5-SMAD8 complex. The regulation of chondrogenic differentiation is inhibited by NOG (PubMed:26643732). Also involved in the induction of adipogenesis from mesenchymal stem cells. This mechanism acts through the growth factor receptors subunits BMPR1A, BMPR2 and ACVR2A and the activation of SMAD1-SMAD5-SMAD8 complex and MAPK14/p38 (By similarity).

Cellular Location Secreted.

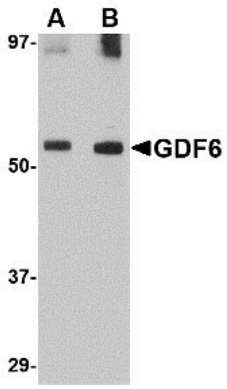
Background

GDF6 Antibody: Growth differentiation factors (GDFs) are members of the transforming growth factor (TGF) superfamily that is involved in embryonic development and adult tissue homeostasis. Both GDF6 and GDF7 are closely related to GDF5 which 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. In Xenopus, GDF6 is expressed at the edge of the neural plate and within the anterior neural plate including the eye fields. GDF6 is required for normal formation of some bones and joints in the limbs, skull, and axial skeleton. It may regulate patterning of the ectoderm by interacting with bone morphogenetic proteins (BMPs), and control eye development. Mutations in this gene result in colobomata, which are congenital abnormalities in ocular development, and in Klippel-Feil syndrome (KFS), a congenital disorder of spinal segmentation.

References

Massague J. 1990. The transforming growth factor-beta family. Ann. Rev. Cell Biol.6:597-641.
McPherron AC, Lawler AM, and Lee SJ. Regulation of skeletal muscle mass in mice by a new TGF-beta superfamily member. Nature1997; 387:83-90.
Hanel ML and Hensey C. Eye and neural defects associated with loss of GDF6. BMC Dev. Biol.2006; 6:43.
Settle SH Jr., Rountree RB, Sinha A, et al. Multiple joint and skeletal patterning defects caused by single and double mutations in the mouse Gdf6 and Gdf5 genes. Dev. Biol.2003; 254:116-130.

Images



Western blot analysis of GDF6 in SK-N-SH lysate with GDF6 antibody at (A) 0.5 and (B) 1 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.