10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Follistatin Antibody

Catalog # AP51216

Product Information

Application	WB, IHC
Primary Accession	P19883
Reactivity	Human, Mouse, Rat, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	38007

Additional Information

Gene ID	10468
Other Names	Follistatin; FS; Activin-binding protein
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Follistatin. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

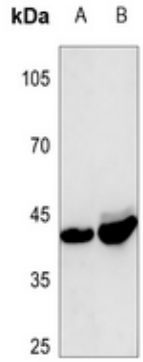
Name	FST (HGNC:3971)
Function	Multifunctional regulatory protein whose primary function is to antagonize members of the transforming growth factor beta (TGF-beta) superfamily including activin, myostatin, GDF11 or bone morphogenetic proteins (BMPs) (PubMed:11279126, PubMed:16482217, PubMed:18535106). Mechanistically, binds to these ligands in the extracellular space, blocking their type II receptor-binding site to inhibit downstream signaling (PubMed:16482217). Plays an essential role in muscle fiber formation and growth both by preventing the repressive effects of myostatin and through SMAD3/AKT/mTOR signaling independently of myostatin (By similarity). Also promotes neural differentiation by antagonizing the action BMP4 (By similarity). Acts as a specific inhibitor of the biosynthesis and secretion of pituitary follicle stimulating hormone (FSH) by sequestering activin A/INHBA (PubMed:11279126). On the other hand, translocates into the nucleus where it down-regulates rRNA synthesis and ribosome biogenesis to maintain cellular energy homeostasis by binding to rDNA.

Cellular Location	Secreted. Nucleus, nucleolus
Tissue Location	Isoform 1 is the predominant isoform in serum but is undetectable in follicular fluid. In the embryo, strong expression is seen in the palatal epithelia, including the medial edge epithelial and midline epithelial seam of the palatal shelves. Less pronounced expression is also seen throughout the palatal shelf and tongue mesenchyme (PubMed:31215115).

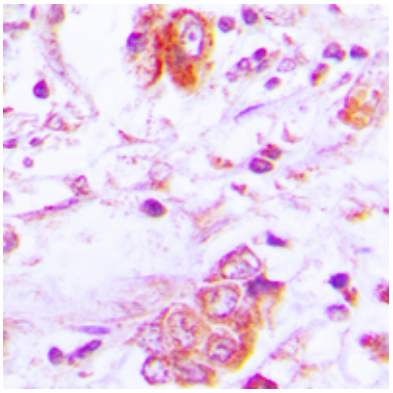
References

Shimasaki S.,et al.Proc. Natl. Acad. Sci. U.S.A. 85:4218-4222(1988).
Goshima N.,et al.Nat. Methods 5:1011-1017(2008).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Zhang Z.,et al.Protein Sci. 13:2819-2824(2004).
Schneyer A.L.,et al.J. Clin. Endocrinol. Metab. 89:5067-5075(2004).

Images



Western blot analysis of Follistatin expression in mouse heart (A), rat heart (B) whole cell lysates. (Predicted band size: 38 kD; Observed band size: 43 kD)



Immunohistochemical analysis of Follistatin staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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