

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Follistatin in direct ELISAs and Western blots. It recognizes the 288 aa, 300 aa, and 315 aa isoforms of human Follistatin. In direct ELISAs and Western blots, this antibody shows approximately 50% cross-reactivity with recombinant mouse Follistatin.
Source	Monoclonal Mouse IgG _{2A} Clone # 85918
Purification	Protein A or G purified from ascites
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Follistatin Gly30-Asp329 Accession # P19883
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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.

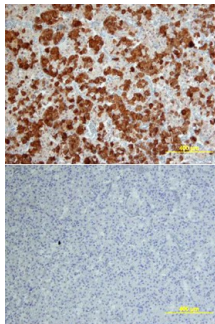
APPLICATIONS

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
Western Blot	1 µg/mL	Recombinant Human Follistatin 300 aa 30-329 (Catalog # 669-FO) under non-reducing conditions only
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



Follistatin in Human Pituitary. Follistatin was detected in immersion fixed paraffin-embedded sections of human pituitary using Human Follistatin Monoclonal Antibody (Catalog # MAB669) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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. <ul style="list-style-type: none"> ● 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.

BACKGROUND

Follistatin (FST) is a secreted glycoprotein that was first identified as a follicle-stimulating hormone inhibiting substance in ovarian follicular fluid (1, 2). Human Follistatin cDNA encodes a 344 amino acid (aa) protein with a 29 aa signal sequence, an N-terminal atypical TGF binding domain, three Follistatin domains that contain EGF-like and kazal-like motifs, and a highly acidic C-terminal tail. The first Follistatin domain (FS1) contains a heparin binding site, while FS1 and FS2 are most critical for activin binding and neutralization (3, 4). In addition to activin, Follistatin regulates bioavailability of many non-TGF- β members of the TGF- β superfamily, such as BMP6, BMP7 and myostatin (5). It also regulates hematopoietic stem cell adhesion to fibronectin via FS2, and binds angiogenin via FS2 and FS3 (6, 7). Some Follistatin binding partners will also bind Follistatin-like proteins such as FSL-3 (3, 5, 6). Of three Follistatin isoforms, the full-length mature Follistatin (FST315) is the most abundant and the sole form in plasma, but has lower binding affinity for both activins and heparins than alternative isoforms (5, 8, 9). The acidic tail is missing in the splice variant FST288 which shows the highest affinity for activins, while a partial tail exists in the proteolytically produced FST303, which shows intermediate activin affinity (5, 8, 9). FST315 shares 98% aa identity with mouse, rat, equine and ovine FST, 99% with porcine and 97% with bovine FST. Genetic deletion of Follistatin in mice, or expression of only the FST288 form, is perinatally lethal due to defects of lung, skin and musculoskeletal system (10). Expression of only the FST315 isoform allows survival, with defects in vascularization and female fertility (10).

References:

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