Human Follistatin Antibody

Monoclonal Mouse IgG_{2B} Clone # 85920

Catalog Number: MAB6691

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Follistatin in direct ELISAs.
Source	Monoclonal Mouse IgG_{2B} Clone # 85920
Purification	Protein A or G purified from ascites
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human Follistatin Gly30-Asp329 Accession # P19883
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.*

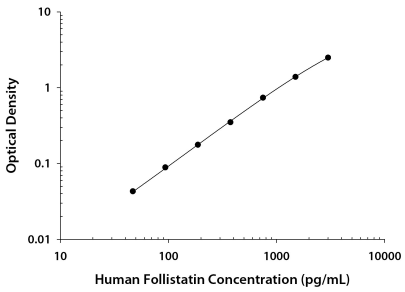
ELISA

This antibody functions as an ELISA capture antibody when paired with Mouse Anti-Human Follistatin Monoclonal Antibody (Catalog # MAB6692).

This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human Follistatin DuoSet ELISA Kit (Catalog # DY669) for convenient development of a sandwich ELISA or the Human Follistatin Quantikine ELISA Kit (Catalog # DFN00) for a complete optimized ELISA.

DATA

ELISA



Human Follistatin ELISA Standard Curve. Recombinant Human Follistatin protein was serially diluted 2-fold and captured by Mouse Anti-Human Follistatin Monoclonal Antibody (Catalog # MAB6691) coated on a Clear Polystyrene Microplate (Catalog # DY990). Mouse Anti-Human Follistatin Monoclonal Antibody (Catalog # MAB6692) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

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.** ● 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.

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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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