

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 Fol
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
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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).

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