

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Follistatin in direct ELISAs.                                                                                                                                                                                                                                 |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 85943                                                                                                                                                                                                                             |
| <b>Purification</b>       | Protein A or G purified from ascites                                                                                                                                                                                                                                        |
| <b>Immunogen</b>          | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Follistatin<br>Gly30-Asp329<br>Accession # P19883                                                                                                                                             |
| <b>Conjugate</b>          | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm                                                                                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

**ELISA** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | 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).

## PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.