# Recombinant Human Follistatin 300 aa 30-329

Catalog Number: 669-FO/CF

## DESCRIPTION

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| **Source** | *Spodoptera frugiperda*, *Sf* 21 (baculovirus)-derived human Follistatin protein<br>Gly30-Asp329, with an N-terminal Met<br>Accession # P19883 |
| **N-terminal Sequence Analysis** | Met |
| **Predicted Molecular Mass** | 31 kDa |

## SPECIFICATIONS

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| **SDS-PAGE** | 38-43 kDa, reducing conditions |
| **Activity** | Measured by its ability to neutralize Activin-mediated erythroid differentiation of K562 human chronic myelogenous leukemia cells. The $ED_{50}$ for this effect is 0.1-0.4 µg/mL in the presence of 7.5 ng/mL of rhActivin A. |
| **Endotoxin Level** | <0.01 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

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| **Reconstitution** | Reconstitute at 100 µg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>• 12 months from date of receipt, -20 to -70 °C as supplied.<br>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>• 3 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

Follistatin (FS) was initially identified as a follicle-stimulating hormone inhibiting substance found in ovarian follicular fluid. It has since been shown that FS is a high-affinity activin-binding protein that can act as an activin antagonist. Two alternatively spliced follistatin mRNAs, encoding mature FS with 288 amino acid (aa) residues (FS-288) and 315 aa residues (FS-315), exist. Natural FS purified from porcine ovaries is primarily a carboxy-terminal truncated form of FS-315 composed of 300 aa residues. The recombinant human FS-300 produced at R&D Systems contains 301 aa residues and represents a molecular form derived from human FS-315 containing a truncation of 15 residues from the carboxy–terminus. FS-288 binds with high-affinity to cell-surface heparan sulfate proteoglycans whereas FS-315 binds with low-affinity. The binding affinity of R&D Systems' FS-300 to heparan sulfate has not been determined. Cell surface-associated FS has been suggested to play a role in the clearance and bioavailability of activin in vivo. Besides activin, FS has also been shown to bind with multiple BMPs and to inhibit BMP activity in early Xenopus embryos. FS deficient mice have been shown to have multiple embryonic defects that will result in death shortly after birth. Over-expression of FS can also cause reproductive defects in transgenic mice.

**References:**


1. Iemura, S. *et al.* (1998) Proc. Natl. Acad. Sci. USA **95**:9337
2. Guo, Q. (1998) Mol. Endocrinol. **12**:96
3. Hashimoto, O. *et al.* (1997) J. Biol. Chem. **272**:13835




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