

Product Information

FOLLISTATIN (FS) 288

Mouse, Recombinant,
Expressed in Sf21 cells

Product Number **F 2177**

Product Description

Recombinant Mouse Follistatin (FS) 288 is produced from a DNA sequence encoding amino acid residues Gly 30 to Asn 317 of mouse follistatin precursor protein fused to the signal peptide of human CD33.¹

Recombinant mouse FS-288 is generated after cleavage of 16 amino acid residues from the CD33 signal peptide. It contains 289 amino acid residues and has a calculated molecular mass of approximately 31 kDa. Due to glycosylation, the recombinant protein migrates as a 35 to 40 kDa protein in SDS-PAGE under reducing conditions.

Follistatin (FS) was initially identified as a follicle-stimulating hormone inhibiting substance found in ovarian follicular fluid. FS, a high-affinity activin-binding protein, acts as an activin antagonist.² Two alternatively spliced follistatin mRNAs, encoding mature FS with 288 and 315 amino acid residues (FS-288 and FS-315), exist. FS-288 binds with high-affinity to cell-surface heparan sulfate proteoglycans whereas FS-315 binds with low-affinity.³ Cell surface-associated follistatin plays a role in the clearance and bioavailability of activin *in vivo*. In addition to activin, FS binds to multiple BMPs (bone morphogenetic proteins) and inhibits BMP activity in early *Xenopus* embryos.⁴ Overexpression of FS causes reproductive defects in transgenic mice and FS deficient mice will have multiple embryonic defects that result in death shortly after birth.^{5,6}

Reagent

Recombinant Mouse Follistatin 288 is supplied as approximately 25 µg of protein lyophilized from a 0.2 µm filtered solution in 35% acetonitrile and 0.1% TFA containing 1.25 mg of bovine serum albumin.

Preparation Instructions

Reconstitute the contents of the vial using sterile phosphate-buffered saline (PBS) containing at least 0.1% human serum albumin or bovine serum albumin. Prepare a stock solution of no less than 10 µg/ml.

Storage/Stability

Store at -20 °C. Upon reconstitution, store at 2 °C to

8 °C for one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Do not store in a frost-free freezer.

Product Profile

Recombinant Mouse Follistatin (FS) 288 is measured by its ability to neutralize activin-mediated erythroid differentiation of K562 cells.

The ED₅₀ for this effect is typically 0.04 to 0.4 µg/ml in the presence of 7.5 ng/ml recombinant human Activin A.

The ED₅₀ is defined as the effective concentration of growth factor that elicits a 50 % increase in cell growth in a cell based bioassay.

Purity: > 95 % as determined by SDS-PAGE, visualized by silver stain.

Endotoxin level is < 0.1 ng/µg protein as determined by the LAL (Limulus amoebocyte lysate) method.

References

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4. Iemura, S., et al., Direct binding of follistatin to a complex of bone-morphogenetic protein and its receptor inhibits ventral and epidermal cell fates in early *Xenopus* embryo. *Proc. Natl. Acad. Sci. USA*, **95**, 9337 (1998).

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6. Patel, K., Follistatin. Int. J. Biochem. Cell Biol., **30**, 1087 (1998).

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