

Cytokines

Human Recombinant Follistatin



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Catalog # 78109
78109.1

Follistatin

20 µg
100 µg

Product Description

Follistatin, a glycosylated monomeric protein, is a modulator of transforming growth factor beta (TGF-β) superfamily signaling. It binds to and inhibits the function of activin, myostatin, growth differentiation factors, and bone morphogenetic proteins (BMP) (Hansen & Plomgaard). Follistatin inhibits mesoderm induction, suppresses synthesis and secretion of pituitary follicle-stimulating hormone, regulates liver regeneration, and causes infertility (Guo et al.; Iemura et al.). Follistatin exhibits anti-inflammatory effects, and it could be used as a biomarker in cancer (Hansen & Plomgaard).

Product Information

Alternative Names: Activin-binding protein, FS, FSH-suppressing protein, FSP
Accession Number: P19883
Amino Acid Sequence: MGNCWLRQAK NGRCQVLYKT ELSKEECCST GRLSTSWTEE DVNDNTLFKW MIFNGGAPNC IPCKETCENV DCGPGKKCRM NKKNKPRCVC APDCSNITWK GPVCGLDGKT YRNECALLKA RCKEQPELEV QYQGRCKKTC RDVFCPGSST CVVDQTNAY CVTCNRICPE PASSEQYLCG NDGVTYSSAC HLRKATCLLG RSLGLAYEGK CIKAKSCEDI QCTGGKKCLW DFKV
Predicted Molecular Mass: 31.7 kDa
Species: Human
Cross Reactivity: Mouse
Formulation: Lyophilized from a sterile-filtered aqueous solution containing sodium phosphate and sodium chloride, pH 7.5.
Source: E. coli

Specifications

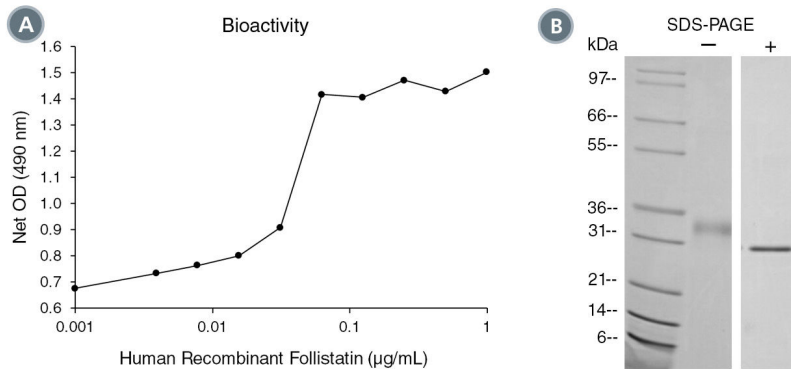
Activity: The specific activity is $\geq 5.0 \times 10^3$ units/mg ($EC_{50} \leq 0.20$ µg/mL) as determined by neutralization of human activin A-induced cytotoxicity of MPC-11 cells.
Purity: $\geq 95\%$
Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage: Store at -20°C to -80°C.
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.

OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant Follistatin was tested by neutralization of human activin A-induced cytotoxicity of MPC-11 cells. Cell viability was measured after 66 hours using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which cell viability is at 50% of maximum. The EC₅₀ in the above example is 0.04 µg/mL.

(B) 1 µg of Human Recombinant Follistatin was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

- Guo Q et al. (1998) Overexpression of mouse follistatin causes reproductive defects in transgenic mice. *Mol Endocrinol* 12(1): 96–106.
- Hansen JS & Plomgaard P. (2016) Circulating follistatin in relation to energy metabolism. *Mol Cell Endocrinol* 433: 87–93.
- Iemura S et al. (1998) 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(16): 9337–42.

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