Cytokines

Human Recombinant Follistatin

Follistatin

Catalog #	78109	20 µg
	78109.1	100 µg

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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 CVVDQTNNAY CVTCNRICPE PASSEQYLCG NDGVTYSSAC HLRKATCLLG RSIGLAYEGK CIKAKSCEDI QCTGGKKCLW DFKVGRGRCS LCDELCPDSK SDEPVCASDN ATYASECAMK EAACSSGVLL EVKHSGSCN
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

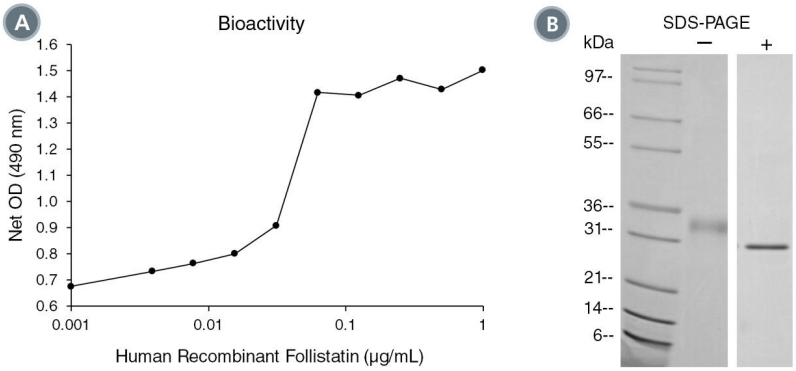
Specifications

Activity:	The specific activity is ≥ 5.0 x 10^3 units/mg (EC50 ≤ 0.20 µg/mL) as determined by neutralization of human activin A-induced cytotoxicity of MPC-11 cells.
Purity:	≥ 95%
Endotoxin Level:	Measured by kinetic Limulus amebocyte 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. Human Recombinant Follistatin has a predicted molecular mass of 31.7 kDa.

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.