



Synonym

Follistatin,FST,FS,FSP

Source

Human Follistatin Protein, His Tag, premium grade(FON-H52H4) is expressed from human 293 cells (HEK293). It contains AA Gly 30 - Asn 317 (Accession # [P19883-2](#)).

Predicted N-terminus: Gly 30

It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization

Follistatin(Gly 30 - Asn 317)
P19883-2 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 33.4 kDa . The protein migrates as 35-36 kDa, 38-40 kDa and 41-43 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.1 EU per µg by the LAL method.

Sterility

Negative

Mycoplasma

Negative.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

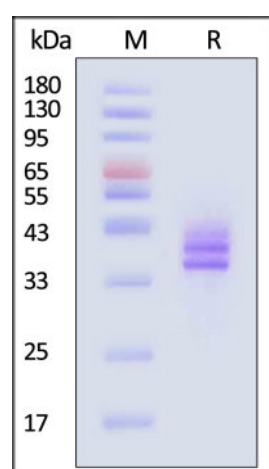
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



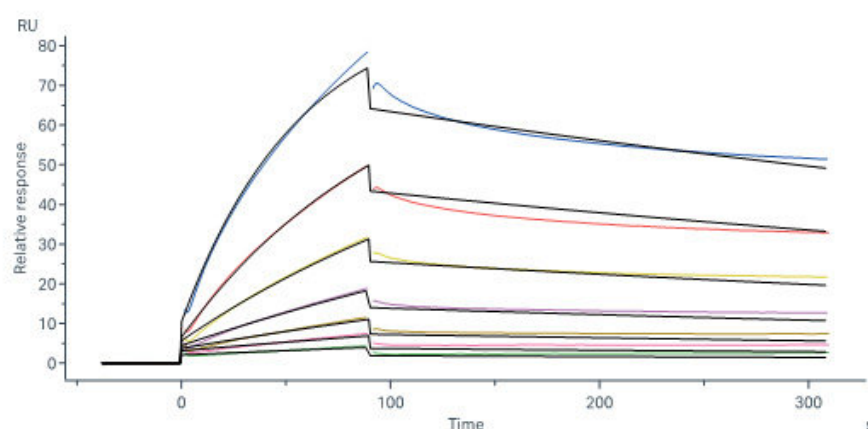
Human Follistatin Protein, His Tag, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

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Bioactivity-SPR



Human Follistatin Protein, His Tag, premium grade (Cat. No. FON-H52H4) immobilized on CM5 Chip can bind Human latent GDF-8, His Tag (Cat. No. GD8-H5243) with an affinity constant of 364 nM as determined in a SPR assay (Biacore 8K) (QC tested).

Background

Follistatin is also known as activin-binding protein, FST and FSH-suppressing protein (FSP), and is a secreted autocrine glycoprotein that is expressed in nearly all tissues of higher animals. Its primary function is the binding and bionutralization of members of the TGF- β superfamily, with a particular focus on activin, a paracrine hormone. Currently there are three reported isoforms, FS-288, FS-300, and FS-315. Two, FS-288 and FS-315, are known to be created by alternative splicing of the primary mR transcript. FS-300 (porcine follistatin) is thought to be the product of posttranslational modification via truncation of the C-terminal domain from the primary amino-acid chain. The activin-binding protein follistatin is produced by folliculostellate (FS) cells of the anterior pituitary. FS cells make numerous contacts with the classical endocrine cells of the anterior pituitary including gonadotrophs. In the tissues activin has a strong role in cellular proliferation. In the blood, activin and follistatin are both known to be involved in the inflammatory response following tissue injury or pathogenic incursion. Follistatin is involved in the development of the embryo. It has inhibitory action on bone morphogenic proteins (BMPs); BMPs induce the ectoderm to become epidermal ectoderm. Inhibition of BMPs allows neuroectoderm to arise from ectoderm, a process which eventually forms the neural plate. Other inhibitors involved in this process are noggin and chordin. Follistatin and BMPs are also known to play a role in folliculogenesis within the ovary. A study has also shown that increased levels of follistatin, by leading to increased muscle mass of certain core muscular groups, can increase life expectancy in cases of spinal muscular atrophy (SMA) in animal models.

Clinical and Translational Updates

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