Data Sheet (Cat.No.TMPY-03368)

TargetMol

Follistatin Protein, Mouse, Recombinant (hFc)

General Information

Synonyms:	follistatin;FS;AL033346
Protein Construction:	A DNA sequence encoding the mouse FST (P47931) (Met 1-Asn 317) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Gly 30
Species:	Mouse
Expression Host:	CHO Cells
Accession:	P47931
Molecular Weight:	58.4 kDa (predicted); 66 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to neutralize Activin-mediated inhibition on MPC11 cell proliferation. The ED50 for this effect is typically 40-200 ng/mL in the presence of 10 ng/mL rhActivin A.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Follistatin is a single-chain gonadal protein that specifically inhibits follicle-stimulating hormone release. The single FST gene encodes two isoforms, FST317 and FST344 containing 317 and 344 amino acids respectively, resulting from alternative splicing of the precursor mRNA. In a study in which 37 candidate genes were tested for linkage and association with polycystic ovary syndrome (PCOS) or hyperandrogenemia in 150 families, evidence was found for linkage between PCOS and follistatin. follistatin are expressed and subserve local regulatory roles in

numerous extragonadal tissues, including brain, adrenal, bone marrow, and placenta but perhaps most notably in anterior pituitary-the classical target tissue for inhibin, the activin-follistatin system may play a key role in early embryogenesis. Follistatin binds directly to activin and functions as an activin antagonist. Specific inhibitor of the biosynthesis and secretion of pituitary follicle stimulating hormone follistatin is a binding protein to activin. Since activin binds to follistatin, it is imperative to determine the nature of the activin/follistatin binding complex.

Reference

Carroll RS, et al. (1989) Inhibin, activin, and follistatin: regulation of follicle-stimulating hormone messenger ribonucleic acid levels. Mol Endocrinol. 3(12): 1969-76.

Fainsod A, et al. (1997) The dorsalizing and neural inducing gene follistatin is an antagonist of BMP-4. Mech Dev. 63(1): 39-50.

Kaiser UB, et al. (1992) Follistatin gene expression in the pituitary: localization in gonadotropes and folliculostellate cells in diestrous rats. Endocrinology. 130(5): 3048-56.

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