

FSTL1 Protein, Human, Recombinant (His)

General Information

Synonyms:	MIR198;FSL1;follistatin-like 1;FRP
Protein Construction:	A DNA sequence encoding the human FSTL1 (NP_009016.1) precursor (Met 1-Ile 308) with a carboxy-terminal polyhistidine tag was expressed. Predicted N terminal: Glu 21
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q12841-1
Molecular Weight:	34.2 kDa (predicted); 47 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 98 % 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:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
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. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Follistatin-related protein 1 (FSTL1) is an extracellular glycoprotein whose functional significance in physiological and pathological processes is incompletely understood. Recently, we have shown that FSTL1 acts as a muscle-derived secreted factor that is up-regulated by Akt activation and ischemic stress and that FSTL1 exerts favorable actions on the heart and vasculature. Here, we sought to identify the receptor that mediates the cellular actions of FSTL1. It contains an FS module, a follistatin-like sequence containing 10 conserved cysteine residues. FSTL1 is

thought to be an autoantigen associated with rheumatoid arthritis. DIP2A functions as a novel receptor that mediates the cardiovascular protective effects of FSTL1. Experiment results have provided in vivo and in vitro evidence to demonstrate that Fstl1 modulates lung development and alveolar maturation, in part, through BMP4 signaling.

Reference

Rosenberg MI, et al. (2006) MyoD inhibits Fstl1 and Utrn expression by inducing transcription of miR-206. *J Cell Biol.* 175(1): 77-85.

Ouchi N, et al. (2010) DIP2A functions as a FSTL1 receptor. *J Biol Chem.* 285(10): 7127-34.

Geng Y, et al. (2011) Follistatin-like 1 (Fstl1) is a bone morphogenetic protein (BMP) 4 signaling antagonist in controlling mouse lung development. *Proc Natl Acad Sci U S A.* 108(17): 7058-63.

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