

Mouse FLRG / Fstl3 Protein (His Tag)

Catalog Number: 50029-M08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

FLRG; FSRP; E030038F23Rik; Flrg

Protein Construction:

A DNA sequence encoding the mouse FLRG (NP_113557.1) (Met 1-Val 256) was fused with a polyhistidine tag at the C-terminus.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. Immobilized mouse FLRG-His (Cat: 10591-M08H) at 10 µg/ml (100 µl/well) can bind biotinylated human INHBA-His (Cat: 10429-H08H) with a linear range of 6.25-50 ng/ml. 2. Measured by its binding ability in a functional ELISA. Immobilized mouse FLRG-His (Cat: 10591-M08H) at 10 µg/ml (100 µl/well) can bind biotinylated mouse INHBA-His (Cat: 50659-M08H) with a linear range of 6.25-50 ng/ml. 3. Measured by its ability to neutralize Activin-mediated inhibition on MPC11 cell proliferation. The ED₅₀ for this effect is typically 5-25 ng/mL in the presence of 10 ng/mL rhActivin A.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Val 24

Molecular Mass:

The secreted recombinant mouse FLRG generated after removal of the signal peptide comprises 244 amino acids with a predicted molecular mass of 26 kDa. As a result of glycosylation, it migrates as an approximately 35-40 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

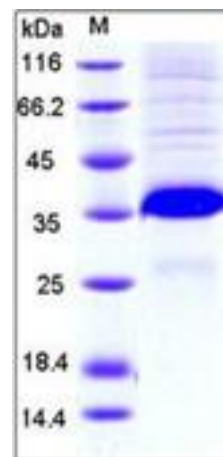
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Follistatin-like 3 (FLRG/Fstl3) is a secreted glycoprotein of the follistatin-module-protein family. It may have a role in leukemogenesis. FLRG/Fstl3 is a recently described member of the FST family having an overall structure and activity profile similar to that of FST, including binding and neutralization of activin. FLRG/Fstl3 is expressed in a wide range of adult tissues, not detected in hematopoietic cells except in patients with a B cell chronic leukemia and a translocation. Isoform 1 or the secreted form is a binding and antagonizing protein for members of the TGF-beta family, such as activin, BMP2 and MSTN. Inhibits activin A-, activin B-, BMP2- and MSDT-induced cellular signaling; more effective on activin A than on activin B. Involved in bone formation; inhibits osteoclast differentiation. Involved in hematopoiesis; involved in differentiation of hemopoietic progenitor cells, increases hematopoietic cell adhesion to fibronectin and seems to contribute to the adhesion of hematopoietic precursor cells to the bone marrow stroma. Isoform 2 of FLRG/Fstl3 or the nuclear form of FLRG/Fstl3 is probably involved in transcriptional regulation via interaction with MLLT10. Modulation of activin and other TGFβ superfamily signaling is the primary mechanism of action for both follistatin (FS) and FS-like 3 (FSTL-3). FLRG/Fstl3 is likely to be a local regulator of activin action in gonadal development and gametogenesis and, further, that activin appears to have important actions in gonadal development and function that are critical for normal reproduction.

References

1. Sidis Y, *et al.* (2006) Biological activity of follistatin isoforms and follistatin-like-3 is dependent on differential cell surface binding and specificity for activin, myostatin, and bone morphogenetic proteins. *Endocrinology*. 147(7): 3586-97.
2. Schneyer A, *et al.* (2003) Differential binding and neutralization of activins A and B by follistatin and follistatin like-3 (FSTL-3/FSRP/FLRG). *Endocrinology*. 144(5): 1671-4.
3. Xia Y, *et al.* (2004) Overexpression of follistatin-like 3 in gonads causes defects in gonadal development and function in transgenic mice. *Mol Endocrinol*. 18(4): 979-94.

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