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Recombinant Mouse TWSG1 Protein

Catalog No.: RP02116 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	65960	Q9EP52

Tags
C-His

Synonyms
Tsg; Twg; AW552143; D17Ertd403e; 1810013J15Rik; 9030422N06Rik

Product Information

Source	Purification
HEK293 Cells	≥ 90 % as determined by SDS-PAGE.

Calculated MW	Observed MW
23.6kDa	34 kDa

Endotoxin
< 1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

TWSG1 belongs to the twisted gastrulation protein family. TWSG1 from different species are functionally equivalent. In contrast to Drosophila where TWSG1 expression is limited to early embryos, expression of TWSG1 is found throughout mouse and human development. Mutations in the TWSG1 gene cause at least some of the cells on the dorsal half of the embryo to adopt more ventral cell fates. This is thought to involve gradients of the signaling molecule decapentaplegic. TWSG1 may function as a bone morphogenetic protein signalling agonist or antagonize these activities. It can dislodge latent bone morphogenetic proteins and thus provides a permissive signal that allows high BMP signaling in the embryo. TWSG1 is a cofactor in the antagonism of chordin to BMP signaling. It also binds both the vertebrate Decapentaplegic ortholog BMP4 and chordin and forms ternary complexes. Meanwhile, TWSG1 increases binding of chordin to BMP4, potentiates the ability of chordin to induce secondary axes in Xenopus embryos, and enhances chordin cleavage by vertebrate proteases related to tolloid at a site poorly used in the absence of TWSG1. The presence of TWSG1 enhances the secondary axis-inducing activity of 2 products of chordin cleavage.

Basic Information

Description
Recombinant Mouse TWSG1 Protein is produced by HEK293 Cells expression system. The target protein is expressed with sequence (Met1-Phe222) of human TWSG1 (Accession #NP_075540.1) fused with 6×His tag at the C-terminus.

Bio-Activity

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

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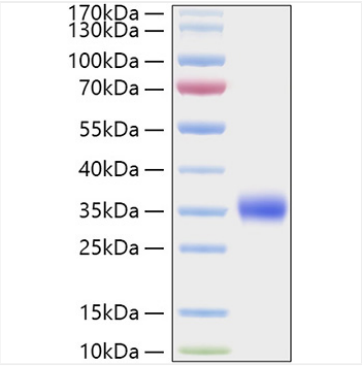
Validation Data



Recombinant Mouse TWSG1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.

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