Recombinant Mouse TWSG1/TSG Protein (His Tag)

Catalog Number: PKSM040833

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

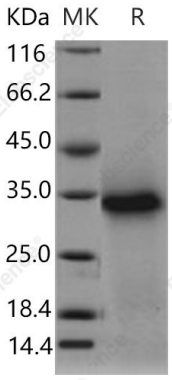
Description

Species	Mouse
Source	HEK293 Cells-derived Mouse TWSG1/TSG protein Met 1-Phe 222, with an C-terminal His
Calculated MW	23.6 kDa
Observed MW	34 kDa
Accession	Q9EP52
Bio-activity	Not validated for activity

Properties

Purity	> 93% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 93 % as determined by reducing SDS-PAGE.

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 embryo s, 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.

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