

TWSG1 Protein, Human (HEK293, His)

Cat. No.:	HY-P71391
Synonyms:	Twisted Gastrulation Protein Homolog 1; TWSG1; TSG
Species:	Human
Source:	HEK293
Accession:	Q9GZX9 (C26-F223)
Gene ID:	57045
Molecular Weight:	Approximately 35.0 kDa

PROPERTIES

AA Sequence	<p>C N K A L C A S D V S K C L I Q E L C Q C R P G E G N C S C C K E C M L C L G A</p> <p>L W D E C C D C V G M C N P R N Y S D T P P T S K S T V E E L H E P I P S L F R</p> <p>A L T E G D T Q L N W N I V S F P V A E E L S H H E N L V S F L E T V N Q P H H</p> <p>Q N V S V P S N N V H A P Y S S D K E H M C T V V Y F D D C M S I H Q C K I S C</p> <p>E S M G A S K Y R W F H N A C C E C I G P E C I D Y G S K T V K C M N C M F</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.2.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>TWSG1 Protein emerges as a key participant in dorsoventral axis formation, showcasing a dual role in the modulation of BMP signaling. It appears to act as both an antagonist and an agonist, influencing BMP signaling dynamics. TWSG1 antagonizes BMP signaling by forming ternary complexes with CHRDL1 and BMPs, thereby hindering BMPs from binding to their receptors. Concurrently, TWSG1 demonstrates pro-BMP activity, facilitated in part by the cleavage and degradation of CHRDL1, releasing BMPs from ternary complexes. This dual functionality suggests that TWSG1 may intricately regulate BMP-mediated processes, particularly in cartilage development and chondrocyte differentiation. Additionally, its potential role in thymocyte development implies a broader impact on cellular differentiation processes. Interactions with key partners,</p>
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including CHR1, BMP4, and BMP7, further emphasize TW1SG1's intricate involvement in the modulation of BMP signaling pathways. Elucidating the specific mechanisms governing TW1SG1's dual actions could provide valuable insights into its multifaceted role in development and differentiation processes.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA