



# Recombinant Human TSG

20150227BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>100-361</b>
Size:	50 µg
Lot. No.:	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	57045
<b>Synonyms:</b>	TWSG1; TSG

Twisted Gastrulation Protein (TSG) is a secreted BMP binding protein structurally related to the BMP antagonists Chordin and Noggin. TSG can inhibit BMP activity by binding directly to BMP proteins, and can act either as a BMP4 agonist or antagonist (depending on the specific biochemical environment) by binding to the BMP4/Chordin complex. Recombinant human TSG is a 199 amino acid 22.2 kDa protein containing the BMP/TGFβ binding portion of the full length TSG protein.

### Sequence

```
MCNKALCASD VSKCLIQELC QCRPGE GNC S CKECMLCLG  
ALWDECCDCV GMCNPRNYS D TPPTSKSTVE ELHEPIPSLF  
RALTEGDTQL NWNIVSFPVA EELSHHENLV SFLETVNQPH  
HQNVSVPSNN VHAPYSSDKE HMCTVVYFDD CMSIHQCKIS  
CESMGASKYR WFNACCECI GPECIDYGSK TVKCMNCF
```

### Database References

<b>Protein RefSeq:</b>	NP_065699.1
<b>Uniprot ID:</b>	Q9GZX9
<b>mRNA RefSeq:</b>	NM_020648.5

## Product Specifications

<b>Expressed in</b>	E. coli
<b>Purity</b>	> 98% by SDS-PAGE & HPLC analyses
<b>Endotoxin level</b>	< 0.1 ng /µg of protein (<1EU/µg).
<b>Formulation</b>	lyophilized
<b>Length (aa):</b>	199
<b>MW:</b>	22.2 kDa

**Biological Activity:** Determined by its ability to neutralize BMP-6 induced alkaline phosphatase production by ATDC chondrogenic cells. The expected ED50 for this effect is < 2.0 µg/ml of TSG.



**AVOID REPEATED FREEZE AND THAW CYCLES!**