

#### DESCRIPTION

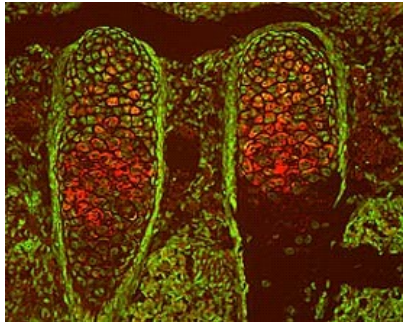
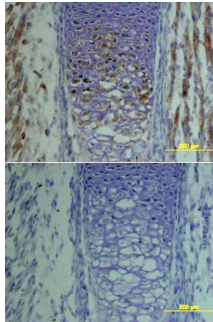
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse TSG in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse TSG Cys25-Phe222 Accession # Q9EP52
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Mouse TSG (Catalog # 756-TG)
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

#### DATA

<b>Immunohistochemistry</b>	<b>Immunohistochemistry</b>
 <p><b>TSG in Mouse Embryo.</b> TSG was detected in immersion fixed frozen sections of mouse embryo using 15 µg/mL Goat Anti-Mouse TSG Antigen Affinity-purified Polyclonal Antibody (Catalog # AF756) overnight at 4 °C. Tissue was stained (red) and counterstained (green). View our protocol for <a href="#">Fluorescent IHC Staining of Frozen Tissue Sections</a>.</p>	 <p><b>TSG in Mouse Embryo.</b> TSG was detected in immersion fixed frozen sections of mouse embryo using Goat Anti-Mouse TSG Antigen Affinity-purified Polyclonal Antibody (Catalog # AF756) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for <a href="#">Chromogenic IHC Staining of Frozen Tissue Sections</a>.</p>

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

Twisted Gastrulation (TSG) is a secreted, cysteine-rich protein that plays a role in dorsal/ventral patterning by regulating BMP signaling in *Drosophila* and *Xenopus*. TSG was originally identified in *Drosophila melanogaster* and shown to be required for the differentiation of the dorsal amnioserosa cells. Vertebrate TSGs were subsequently cloned in mouse, human, zebrafish and frog. Mouse TSG encodes a 222 amino acid (aa) residue precursor protein with a 24 aa residue putative signal peptide that is cleaved to generate the 198 aa residue mature protein. Studies of expression and function of Twisted Gastrulation have been performed in *Drosophila* and *Xenopus*. *Xenopus* TSG is expressed in the ventral regions of the embryo during gastrulation, mimicking the BMP-4 expression pattern. dTSG is expressed in dorsal cells of the blastoderm embryo, where there are also high levels of activity of Dpp and Screw. *In vivo*, TSG acts as an agonist for BMP signaling by modulating the inhibitory actions of the BMP antagonist, Chordin/Sog and the cleavage properties of the metalloprotease, xolloid/tolloid. The N-terminal domain of TSG can bind BMP protein directly *in vitro* and shows BMP antagonist activity.

#### References:

1. Mason, *et al.* (1994) *Genes Dev.* **8**:1489.
2. Oelgeschlager, *et al.* (2000) *Nature* **405**:757.
3. Yu, *et al.* (2000) *Development* **127**:2143.
4. Dale (2000) *Current Biology* **10**:R671.