

DESCRIPTION

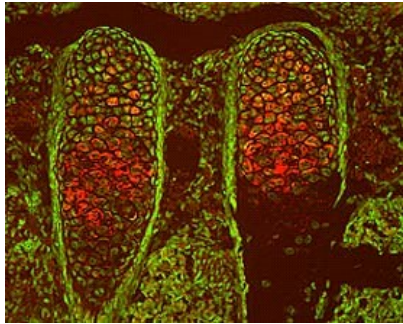
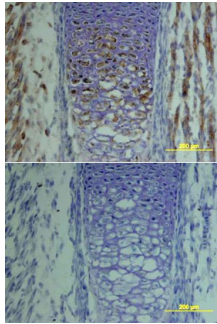
Species Reactivity	Mouse
Specificity	Detects mouse TSG in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse TSG Cys25-Phe222 Accession # Q9EP52
Endotoxin Level	<0.10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

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

DATA

Immunohistochemistry	Immunohistochemistry
 <p>TSG in Mouse Embryo. 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 Fluorescent IHC Staining of Frozen Tissue Sections.</p>	 <p>TSG in Mouse Embryo. 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 & 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 Chromogenic IHC Staining of Frozen Tissue Sections.</p>

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.