

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human TSG-6 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 70% cross-reactivity with recombinant mouse TSG-6 is observed and less than 2% cross-reactivity with recombinant human TSG-14 is observed.                        |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human TSG-6<br>Trp18-Leu277<br>Accession # P98066                                                                                                                                                                           |
| <b>Conjugate</b>          | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm                                                                                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## 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>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

TSG-6 (TNF-stimulated Gene 6), also known as TNFIP6 is a secreted, 35-39 kDa group A member of the LINK-Module superfamily of proteins (1-4). Human TSG-6 is synthesized as a 277 amino acid (aa) precursor. It contains a 17 aa signal sequence and a 260 aa mature region (5, 6). The mature region shows an N-terminal LINK module (amino acids 36-129) and a C-terminal CUB (C1s/C1r; urchin embryonic growth factor; BMP1) domain (amino acids 135-247). Link modules are  $\alpha$ -helical,  $\beta$ -sheet structures that bind hyaluronan (HA) and participate in extracellular matrix (ECM) assembly (7). Mature human TSG-6 shares 94% aa identity with both mouse and canine TSG-6. Cells reported to express TSG-6 include activated fibroblasts, synoviocytes, chondrocytes, neutrophils, proximal tubular epithelium, bronchial epithelium, endothelium, and visceral, plus vascular smooth muscle (2, 8). TSG-6 has multiple functions, many of which involve the ECM. It is suggested to stabilize HA-rich ECM. It does so by serving as an intermediary, or link, between the individual subunits of extracellular decameric pentraxin 3 and the surrounding hyaluronan matrix (9). It also provides structure and organization to hyaluronan. This is accomplished by a TSG-6 mediated transfer of an 80-85 kDa HC subunit from Ial (inter- $\alpha$ -inhibitor) to HA. Ial is a four-component, 225 kDa serine protease inhibitor. It contains a protease inhibitor subunit (bikunin), two independent, accompanying protein chains (HC1 and HC2), and a short chondroitin sulfate linking moiety. TSG-6 is a cation-dependent catalyst for the removal, transfer, and subsequent covalent linkage of HC 1/2 to surrounding HA. This provides substance and reinforcement to the ECM (1, 2, 10-12). The disassembly of Ial also leads to free bikunin, which in the "free" state becomes a potent inhibitor of serine proteases (8).

## PRODUCT SPECIFIC NOTICES

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