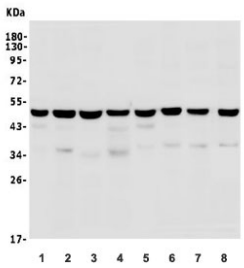
TSG101 Antibody / Tumor susceptibility gene 101 (RQ5849)

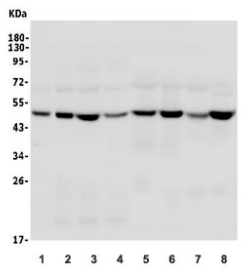
Catalog No.	Formulation	Size
RQ5849	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

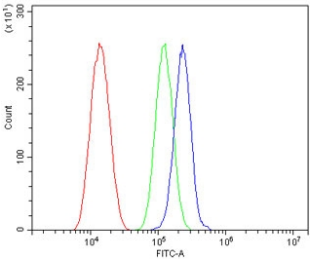
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q99816
Applications	Western Blot : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml Immunoprecipitation : 2ug per 500ug of lysate
Limitations	This TSG101 antibody is available for research use only.



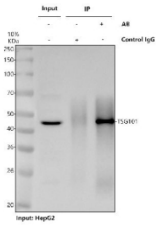
Western blot testing of rat 1) brain, 2) testis, 3) liver, 4) spleen and mouse 5) brain, 6) testis, 7) liver and 8) spleen lysate with TSG101 antibody. Predicted molecular weight ~45 kDa.



Western blot testing of human 1) placenta, 2) COLO-320, 3) SW620, 4) Caco-2, 5) HEK293, 6) K562, 7) HepG2 and 8) ThP-1 lysate with TSG101 antibody. Predicted molecular weight ~45 kDa.



Flow cytometry testing of human SiHa cells with TSG101 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= TSG101 antibody.



Immunoprecipitation of TSG101 protein from 500ug of human HepG2 whole cell lysate with 2ug of TSG101 antibody.

Description

TSG101 antibody targets Tumor susceptibility gene 101 (TSG101), a cytoplasmic protein that functions as a core component of the endosomal sorting complex required for transport I (ESCRT-I). TSG101 plays a central role in the sorting of ubiquitinated membrane proteins into multivesicular bodies for lysosomal degradation. The protein localizes predominantly to the cytoplasm and endosomal membranes, where it coordinates cargo recognition and vesicle formation through interactions with other ESCRT components. As a member of the ESCRT machinery, TSG101 is essential for maintaining endosomal trafficking and membrane protein homeostasis.

Functionally, TSG101 binds ubiquitinated cargo proteins via its ubiquitin E2 variant domain and facilitates their incorporation into intraluminal vesicles. This process is critical for downregulating cell surface receptors, terminating signaling pathways, and regulating membrane protein turnover. TSG101 is broadly expressed across tissues, reflecting the universal requirement for controlled endosomal sorting and lysosomal degradation in eukaryotic cells. A TSG101 antibody supports studies examining endosomal trafficking and protein degradation pathways.

Beyond its role in receptor downregulation, TSG101 participates in additional cellular processes that rely on ESCRT function, including cytokinesis, membrane repair, and viral budding. During cell division, TSG101 contributes to abscission, the final step of cytokinesis, ensuring proper separation of daughter cells. Its involvement in membrane scission events highlights the versatility of ESCRT components in diverse membrane remodeling contexts. A TSG101 antibody enables investigation of ESCRT-dependent processes under physiological and experimental conditions.

From a biological and disease-relevance perspective, TSG101 has been studied in the context of cancer biology, viral infection, and neurodegenerative disease. Dysregulation of ESCRT-mediated trafficking can lead to altered receptor signaling, impaired protein clearance, and cellular stress. TSG101 interactions are also exploited by enveloped viruses to facilitate viral egress, underscoring its importance in host-pathogen interactions. Understanding TSG101 expression and regulation provides insight into how membrane trafficking pathways influence disease-related cellular behavior.

At the molecular level, TSG101 is encoded by the TSG101 gene and produces a protein of approximately 391 amino acids. The protein contains an N-terminal ubiquitin E2 variant domain, a coiled-coil region, and C-terminal motifs that mediate interactions with other ESCRT proteins. Regulation of TSG101 function depends on protein-protein interactions and cellular trafficking demand. A TSG101 antibody supports research applications focused on endosomal sorting, membrane trafficking, and ESCRT-mediated cellular processes, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the TSG101 antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids E223-K257) was used as the immunogen for the TSG101 antibody.

Storage

After reconstitution, the TSG101 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.