abcam

ab83

Anti-TSG101 antibody [4A10] - BSA and Azide free

Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83) is a mouse monoclonal antibody provided in a PBS only buffer for easy conjugation detecting TSG101 in **Western Blot, Flow Cytometry, IHC-P**. Suitable for **Human, Mouse**.

- BSA, sodium azide, and glycerol-free for easy conjugation
- Over 290 publications
- Trusted since 1999

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human Tumor susceptibility gene 101 protein aa 150-400. The exact immunogen used to generate this antibody is proprietary information. Database link Q99816
Carrier free	Yes
Clone number	4A10
Purification technique	Affinity purification Protein G
Specificity	This antibody recognizes the TSG-101 protein, the product of a recently identified tumor susceptibility gene the inactivation of which in mouse fibroblasts results in cell transformation and the ability of those cells to form tumors in nude mice.
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Purification notes	Purified from tissue culture supernatant by Protein G chromatography to at least 95% homogeneity as determined by SDS-PAGE.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/1000
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Recombinant fragment
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/25 - 1/200
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Recombinant fragment
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/500 - 1/3000
Notes	-

Species	Human
Dilution info	1/500 - 1/3000
Notes	-

Not recommended

Species	Recombinant fragment
Dilution info	-
Notes	-

ELISA

Tested

Species	Recombinant fragment
Dilution info	-
Notes	-

Expected

Species	Human, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Tumor susceptibility gene 101 protein

Function	Component of the ESCRT-I complex, a regulator of vesicular trafficking process. Binds to ubiquitinated cargo proteins and is required for the sorting of endocytic ubiquitinated cargos into multivesicular bodies (MVBs). Mediates the association between the ESCRT-0 and ESCRT-I complex. Required for completion of cytokinesis; the function requires CEP55. May be involved in cell growth and differentiation. Acts as a negative growth regulator. Involved in the budding of many viruses through an interaction with viral proteins that contain a late-budding motif P-[ST]-A-P. This interaction is essential for viral particle budding of numerous retroviruses. Required for the exosomal release of SDCBP, CD63 and syndecan (PubMed:22660413). It may also play a role in the extracellular release of microvesicles that differ from the exosomes (PubMed:22315426).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P) in Human, Mouse samples.

What is the molecular weight of TSG101?
Anti-TSG101 [4A10] - BSA and Azide free (ab83) specifically detects a band for TSG101 (UniProt: Q99816) at a molecular weight of 43kDa.

Trusted by the scientific community
Anti-TSG101 [4A10] - BSA and Azide free (ab83) was first used in a scientific publication in 1999 and has been cited over 290 times in peer-reviewed journals.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	TSG101 also known as Tumor Susceptibility Gene 101 is a protein involved in intracellular trafficking specifically notable within the process of endosomal sorting. It is a component of the ESCRT-I (Endosomal Sorting Complex Required for Transport-I) complex. TSG101 is approximately 46 kDa and is expressed ubiquitously across various tissues. The mechanistic function of TSG101 involves the recognition and ubiquitination of cargo proteins an important step in the formation of multivesicular bodies.
Biological function summary	TSG101 plays a critical role in the sorting and trafficking of proteins destined for lysosomal degradation or recycling back to the plasma membrane. It is an essential part of the ESCRT machinery which also includes other components like VPS37 and VPS28. TSG101 interacts with specific domains and motifs on target proteins facilitating the recognition and recruitment of these proteins into vesicles. Its involvement in membrane budding and scission makes it important for maintaining cellular homeostasis and protein quality control.
Pathways	TSG101 is integrally involved in the ESCRT pathway and is associated with processes like viral budding and cytokinesis. Within these pathways it collaborates with proteins such as ALIX and the ESCRT-II component VPS25 to mediate vesicle formation and facilitate the trafficking of ubiquitinated cargo. The ESCRT pathway is vital in cellular responses such as membrane repair and is important for the life cycle of certain enveloped viruses which utilize host cell machinery for budding.
Associated diseases and disorders	Defects or alterations in TSG101 expression have correlations with tumor progression and neurodegenerative diseases. Disruptions in the function of TSG101 can affect cellular processes potentially contributing to conditions like cancer and Alzheimer's disease. For example the aberrant activity of TSG101 may interact with proteins like Hrs and ubiquitin ligases Mdm2 in the context of oncogenic signaling pathways which can drive tumor growth and metastasis. Understanding these interactions is key to uncovering potential therapeutic targets within these diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

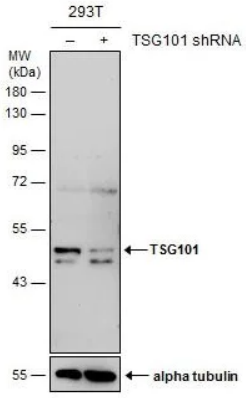
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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8 product images



Western blot - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83)

TSG101 Western blot staining using mouse Anti-TSG101 antibody

10% SDS-PAGE
All lanes:
Western blot - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83) at 1/500 dilution

Lane 1:
Non-transfected (–) 293T whole cell extracts at 30 µg

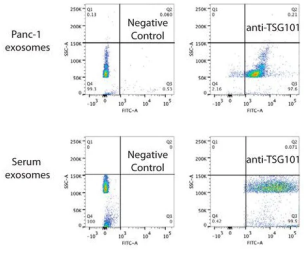
Lane 2:
TSG101 shRNA transfected (+) 293T whole cell extracts at 30 µg

Secondary

All lanes:
HRP-conjugated anti-mouse IgG antibody

Developed using the ECL technique.

Predicted band size: 44 kDa

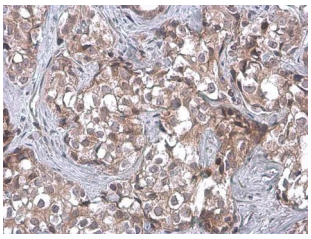


Flow Cytometry - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83)

Panc-1 and Serum Exosomes were characterized by the exosome-specific expression of TSG101 by FACS analysis.

Image from Kahlert C et al., J Biol Chem. 2014;289(7):3869-75. Fig 1(C).; doi: 10.1074/jbc.C113.532267.

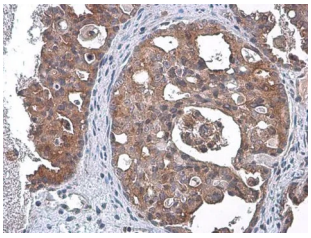
Exosomes were attached to 4-µm aldehyde/sulfate latex beads by mixing ☒30 µg of exosomes in a 100-µl volume of beads for 2 hours at room temperature. This suspension was diluted to 1 ml with PBS, and the reaction was stopped with 100 mm glycine and 2% BSA in PBS. Exosome-bound beads were washed in PBS/1% BSA, blocked with 10% BSA, and stained for FACS with anti-TSG101 (1:400, ab83). An Alexa Fluor® 488 conjugated anti-mouse IgG was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83)

TSG101 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-TSG101 antibody

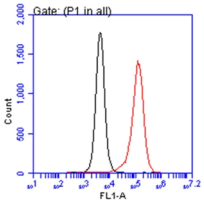
Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue labeling TSG101 with ab83 at 1/100 dilution. Cytoplasmic staining is observed. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83)

TSG101 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-TSG101 antibody

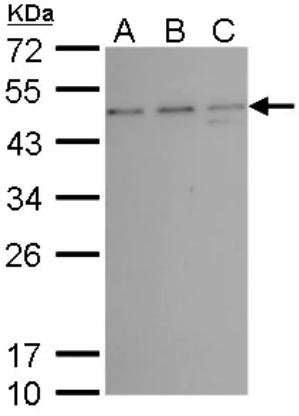
Immunohistochemical analysis of paraffin-embedded human ovarian cancer tissue labeling TSG101 with ab83 at 1/100 dilution. Cytoplasmic staining is observed. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min. (Cuisinart Electric Pressure Cooker #EPC-1200, choose "high pressure"). Endogenous peroxidase blocking: 3% H_2O_2, RT, 30min. Blocking condition: 1.5% goat serum (dilute goat serum by 1xPBS), RT, 30min. Primary antibody incubation: 4°C overnight. Secondary antibody incubation: HRP Kit (Mouse IgG), 1:200, RT, 30min. Washing: PBS, 2 x 5 minutes. DAB detection.



Flow Cytometry - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83)

TSG101 Flow Cytometry staining using mouse Anti-TSG101 antibody

Flow Cytometry analysis of THP-1 cells labeling TSG101 with ab83 at 1/25 dilution (red). Unlabelled sample was used as a control (black). A Dylight 488-conjugated secondary antibody was used for FACS analysis.



Western blot - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83)

10% SDS-PAGE
All lanes:
Western blot - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83) at 1/500 dilution

Lane 1:
NIH-3T3 whole cell lysate/extract at 30 µg

Lane 2:
JC (mouse mammary adenocarcinoma) whole cell lysate/extract at 30 µg

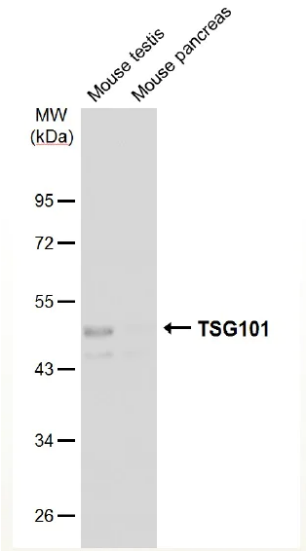
Lane 3:

BCL-1 whole cell lysate/extract at 30 µg

Secondary

All lanes:
HRP-conjugated anti-mouse IgG antibody

Predicted band size: 44 kDa



Western blot - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83)

All lanes:
Western blot - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83) at 1/500 dilution

Lane 1:
Mouse testis tissue extract at 50 µg

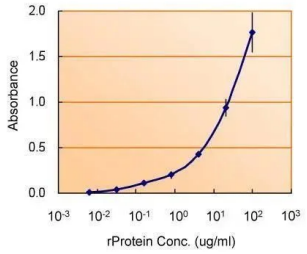
Lane 2:
Mouse pancreas tissue extract at 50 µg

Secondary

All lanes:
HRP-conjugated anti-mouse IgG antibody

Developed using the ECL technique.

Predicted band size: 44 kDa



ELISA - Anti-TSG101 antibody [4A10] - BSA and Azide free (ab83)

ELISA detection of TSG101 using for capture at a concentration of 5 µg/mL and for detection at a concentration of 1.5 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.