abcam

ab277103

Anti-TRIM27 antibody [PCRP-TRIM27-1B3]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human TRIM27. Database link P14373
Clone number	PCRP-TRIM27-1B3
Purification technique	Affinity purification Protein A/G
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from bioreactor concentrate

Reactivity data

ICC

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1-2 µg for 10^6 Cells
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Protein Array

Tested

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information TRIM27

Function

E3 ubiquitin-protein ligase that mediates ubiquitination of various substrates and thereby plays a role in diffent processes including proliferation, innate immunity, apoptosis, immune response or autophagy (PubMed:22829933, PubMed:24144979, PubMed:29688809, PubMed:36111389). Ubiquitinates PIK3C2B and inhibits its activity by mediating the formation of 'Lys-48'-linked polyubiquitin chains; the function inhibits CD4 T-cell activation. Acts as a regulator of retrograde transport: together with MAGEL2, mediates the formation of 'Lys-63'-linked polyubiquitin chains at 'Lys-220' of WASHC1, leading to promote endosomal F-actin assembly (PubMed:23452853). Has a transcriptional repressor activity by cooperating with EPC1. Induces apoptosis by activating Jun N-terminal kinase and p38 kinase and also increases caspase-3-like activity independently of mitochondrial events. May function in male germ cell development. Has DNA-binding activity and preferentially bound to double-stranded DNA. Forms a complex with and ubiquitinates the ubiquitin-specific protease USP7, which in turn deubiquitinates RIPK1 resulting in the positive regulation of TNF-induced apoptosis (PubMed:24144979). In addition, acts with USP7 or PTPN11 as an inhibitor of the antiviral signaling pathway by promoting kinase TBK1 ubiquitination and degradation (PubMed:26358190, PubMed:29688809). Acts as a negative regulator of NOD2 signaling by mediating ubiquitination of NOD2, promoting its degradation by the proteasome (PubMed:22829933). Alternatively, facilitates mitophagy via stabilization of active TBK1 (PubMed:36111389). Negatively regulates autophagy flux under basal conditions by directly polyubiquitinating ULK1 (PubMed:35670107). During starvation-induced autophagy, catalyzes non-

degradative ubiquitination of the kinase STK38L promoting its activation and phosphorylation of ULK1 leading to its ubiquitination and degradation to restrain the amplitude and duration of autophagy (PubMed:35670107). (Microbial infection) Positively regulates hepatitis C virus replication by suppressing type I IFN response during infection.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
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

Supplementary info

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

Activity summary	TRIM27 also known as RFP is a protein that belongs to the tripartite motif (TRIM) family. It has a molecular mass of approximately 55 kDa. This protein contains a RING finger one or two B-box motifs and a coiled-coil region which assists in its function as an E3 ubiquitin ligase. It is involved in the ubiquitination process by facilitating the transfer of ubiquitin from the E2 ubiquitin-conjugating enzyme to substrate proteins. TRIM27 is expressed in various tissues with notable expression in the kidney lung and testis.
Biological function summary	This protein is involved in regulating several cellular processes including apoptosis cell cycle progression and transcription. It forms part of certain multiprotein complexes which enables it to interact with a diverse array of substrates. By influencing transcription factors TRIM27 can modulate gene expression patterns and cellular responses to environmental signals. Moreover it plays a role in maintaining cellular homeostasis through its involvement in protein degradation machinery.
Pathways	TRIM27 participates in the ubiquitin-proteasome system and is associated with the regulation of NF-κB signaling. It interacts with proteins such as TRAF2 and NEMO impacting pathways involved in cell survival and inflammatory responses. Both of these pathways are critical for cellular adaptation to stress emphasizing the role of TRIM27 in protecting cells from external and internal challenges.

Associated diseases and disorders	TRIM27 has been implicated in cancer and autoimmune conditions. It has connections to breast cancer where its dysregulation may promote oncogenic pathways by altering protein stability. The protein also interacts with components like NOD2 in autoimmune disease pathways suggesting a link to inflammatory bowel disease. These associations indicate that TRIM27 could serve as a potential target for therapeutic intervention.

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

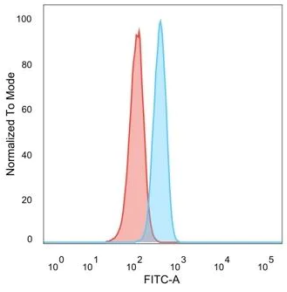
We do not recommend this combination. It is not covered by our product promise.

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.

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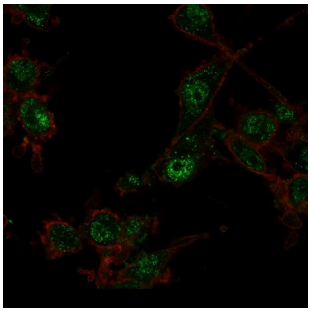
3 product images



Flow Cytometry - Anti-TRIM27 antibody [PCRP-TRIM27-1B3] (ab277103)

TRIM27 Flow Cytometry staining using mouse Anti-TRIM27 antibody

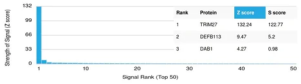
Flow cytometry analysis of PFA-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling TRIM27 using ab277103 at 2 µg / 10^6 cells followed by goat anti-mouse IgG-CF488 (blue); unstained cells (red).



Immunocytochemistry - Anti-TRIM27 antibody [PCRP-TRIM27-1B3] (ab277103)

TRIM27 Immunocytochemistry staining using mouse Anti-TRIM27 antibody

Immunofluorescence analysis of PFA-fixed U87 (human glioblastoma-astrocytoma epithelial cell line) cells labeling TRIM27-1B3 with ab277103 at 2 µg/ml, followed by goat anti-mouse IgG-CF488 (green); phalloidin counterstain (red).



Protein Array - Anti-TRIM27 antibody [PCRP-TRIM27-1B3] (ab277103)

Analysis of Protein Array containing more than 19,000 full-length human proteins using ab277103. Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProtTM array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProtTM are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.

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