abcam

ab277106

Anti-TRIM24 antibody [PCRP-TRIM24-1B12]

Key facts

Isotype	IgG1
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 TRIM24. Database link O15164
Clone number	PCRP-TRIM24-1B12
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	-

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	-

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	-

Target data

See full target information TRIM24

Function	Transcriptional coactivator that interacts with numerous nuclear receptors and coactivators and modulates the transcription of target genes. Interacts with chromatin depending on histone H3 modifications, having the highest affinity for histone H3 that is both unmodified at 'Lys-4' (H3K4me0) and acetylated at 'Lys-23' (H3K23ac). Has E3 protein-ubiquitin ligase activity. During the DNA damage response, participates in an autoregulatory feedback loop with TP53. Early in response to DNA damage, ATM kinase phosphorylates TRIM24 leading to its ubiquitination and degradation. After sufficient DNA repair has occurred, TP53 activates TRIM24 transcription, ultimately leading to TRIM24-mediated TP53 ubiquitination and degradation (PubMed:24820418). Plays a role in the regulation of cell proliferation and apoptosis, at least in part via its effects on p53/TP53 levels. Up-regulates ligand-dependent transcription activation by AR, GCR/NR3C1, thyroid hormone receptor (TR) and ESR1. Modulates transcription activation by retinoic acid (RA) receptors, including RARA. Plays a role in regulating retinoic acid-dependent proliferation of hepatocytes (By similarity). Also participates in innate immunity by mediating the specific 'Lys-63'-linked ubiquitination of TRAF3 leading to activation of downstream signal transduction of the type I IFN pathway (PubMed:32324863). Additionally, negatively regulates NLRP3/CASP1/IL-1beta-mediated pyroptosis and cell migration probably by ubiquitinating NLRP3 (PubMed:33724611).

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	TRIM24 also known as transcription intermediary factor 1-alpha (TIF1α) is a protein that acts mechanically as a transcriptional regulator. It has a molecular mass of approximately 140 kDa. This protein contains several domains including a tripartite motif (the eponymous TRIM) which consists of a RING domain B-box domains and a coiled-coil region. TRIM24 interacts with nuclear receptors and is

	expressed in various tissues but shows higher expression in the liver and lungs. It also plays a role in bridging the interaction between chromatin and transcription factors.
Biological function summary	TRIM24 is involved in transcriptional regulation by influencing gene expression. It acts as a co-regulator being part of large protein complexes. This protein interacts directly with histone tails to read histone marks and release transcriptional repression. TRIM24 also plays a role in ubiquitination and subsequent proteasomal degradation of specific proteins suggesting its involvement in maintaining protein homeostasis. Additionally TRIM24 has been shown to interact with p53 influencing cell cycle regulation and apoptosis.
Pathways	TRIM24 is involved in the regulation of the retinoic acid and vitamin D signaling pathways. It modulates the transcriptional activity of nuclear receptors through these pathways influencing cell proliferation and differentiation processes. TRIM24 does so by interacting with other proteins such as retinoid X receptor (RXR) and estrogen receptor (ER) establishing important crosstalk between signaling cascades critical for cell fate decisions.
Associated diseases and disorders	TRIM24 has been implicated in the development of certain cancers such as breast cancer and liver cancer. In these contexts it functions as an oncogene promoting tumorigenesis through aberrant transcriptional regulation. TRIM24 can interact with other proteins associated with oncogenesis including p53 modulating its tumor suppressor functions. Furthermore deregulation of TRIM24 activity or expression levels has been correlated with inflammatory disorders highlighting its relevance in both cancer and inflammation-related conditions.

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

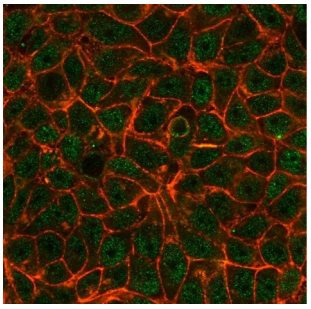
We do not recommend this combination. It is not covered by our product promise.

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.

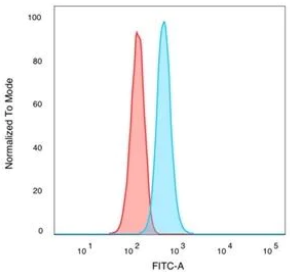
3 product images



Immunocytochemistry - Anti-TRIM24 antibody [PCRP-TRIM24-1B12] (ab277106)

TRIM24 Immunocytochemistry staining using mouse Anti-TRIM24 antibody

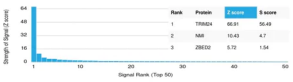
Immunofluorescence analysis of PFA-fixed MCF7 (human breast adenocarcinoma cell line) cells labeling TRIM24 with ab277106 at 2 µg/ml, followed by goat anti-mouse IgG-CF488 (green); phalloidin counterstain (red).



Flow Cytometry - Anti-TRIM24 antibody [PCRP-TRIM24-1B12] (ab277106)

TRIM24 Flow Cytometry staining using mouse Anti-TRIM24 antibody

Flow cytometry analysis of PFA-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling TRIM24 using ab277106 at 2 µg / 10^6 cells followed by goat anti-mouse IgG-CF488 (blue);unstained cells (red).



Protein Array - Anti-TRIM24 antibody [PCRP-TRIM24-1B12] (ab277106)

Analysis of Protein Array containing more than 19,000 full-length human proteins using ab277106. 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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