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Anti-TRIM24 Antibody Picoband™ (monoclonal, 4G6C2)

Catalog # ABO16579

Product Information

Application	WB, IHC, IF, ICC
Primary Accession	O15164
Host	Mouse
Isotype	Mouse IgG1
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-TRIM24 Antibody Picoband™ (monoclonal, 4G6C2) . Tested in IF, IHC, ICC, WB applications. This antibody reacts with Human.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 □g/ml.

Additional Information

Gene ID	8805
Other Names	Transcription intermediary factor 1-alpha, TIF1-alpha, 2.3.2.27, E3 ubiquitin-protein ligase TRIM24, RING finger protein 82, RING-type E3 ubiquitin transferase TIF1-alpha, Tripartite motif-containing protein 24, TRIM24, RNF82, TIF1, TIF1A
Calculated MW	116831
Application Details	Western blot, 0.25-0.5 □g/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 □g/ml, Human Immunocytochemistry/Immunofluorescence, 5 □g/ml, Human
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Clone Names	Clone: 4G6C2
Immunogen	E.coli-derived human TRIM24 recombinant protein (Position: A706-D964).
Purification	Immunogen affinity purified.
Storage	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.

Protein Information

Name	TRIM24
Synonyms	RNF82, TIF1, TIF1A
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).
Cellular Location	Nucleus. Cytoplasm. Mitochondrion. Note=Colocalizes with sites of active transcription. Predominantly nuclear. Translocated from nucleus to mitochondria to mediate antiviral immunity (PubMed:32324863). Localizes to sites of DNA damage (PubMed:25593309).

Background

Tripartite motif-containing 24 (TRIM24) also known as transcriptional intermediary factor 1α (TIF1α) is a protein that, in humans, is encoded by the TRIM24 gene. The protein encoded by this gene mediates transcriptional control by interaction with the activation function 2 (AF2) region of several nuclear receptors, including the estrogen, retinoic acid, and vitamin D3 receptors. The protein localizes to nuclear bodies and is thought to associate with chromatin and heterochromatin-associated factors. The protein is a member of the tripartite motif (TRIM) family. The TRIM motif includes three zinc-binding domains - a RING, a B-box type 1 and a B-box type 2 - and a coiled-coil region. Two alternatively spliced transcript variants encoding different isoforms have been described for this gene.

Images

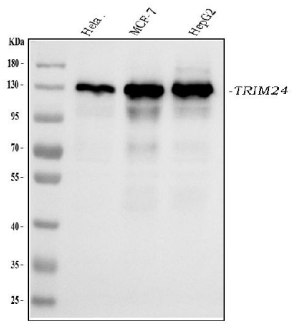


Figure 1. Western blot analysis of TRIM24 using anti-TRIM24 antibody (M03258-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human MCF-7 whole cell lysates,
Lane 3: human HepG2 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes.
Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse

anti-TRIM24 antigen affinity purified monoclonal antibody (Catalog # M03258-2) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for TRIM24 at approximately 130 kDa. The expected band size for TRIM24 is at 117 kDa.

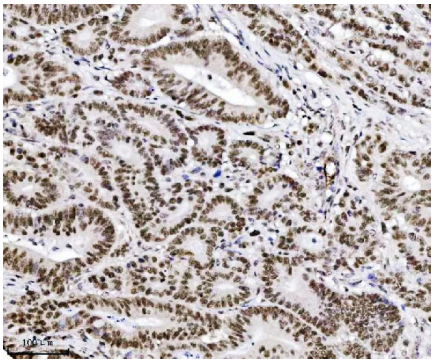


Figure 2. IHC analysis of TRIM24 using anti-TRIM24 antibody (M03258-2).
TRIM24 was detected in a paraffin-embedded section of human adenocarcinoma of the colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-TRIM24 Antibody (M03258-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

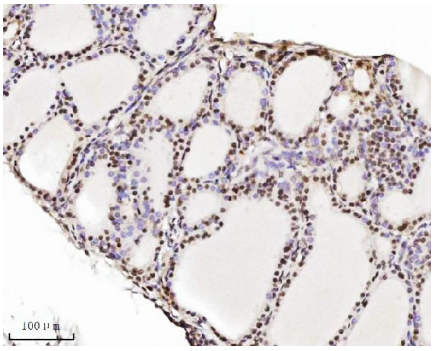


Figure 3. IHC analysis of TRIM24 using anti-TRIM24 antibody (M03258-2).
TRIM24 was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-TRIM24 Antibody (M03258-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

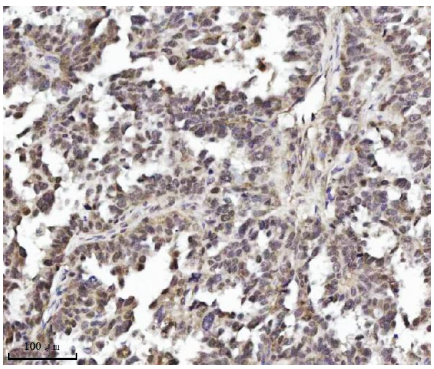
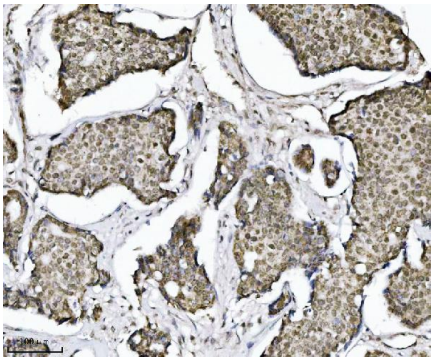


Figure 4. IHC analysis of TRIM24 using anti-TRIM24 antibody (M03258-2).
TRIM24 was detected in a paraffin-embedded section of human ovarian serous tumor tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-TRIM24 Antibody (M03258-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

Figure 5. IHC analysis of TRIM24 using anti-TRIM24 antibody (M03258-2).
TRIM24 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with



10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-TRIM24 Antibody (M03258-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

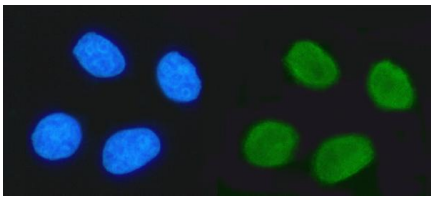


Figure 6. IF analysis of TRIM24 using anti-TRIM24 antibody (M03258-2).
TRIM24 was detected in an immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-TRIM24 Antibody (M03258-2) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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