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TRIM24 Antibody

Catalog # ASC11666

Product Information

Application	WB, IF, ICC, E
Primary Accession	O15164
Other Accession	NP_056989, 47419911
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	116831
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TRIM24 antibody can be used for detection of TRIM24 by Western blot at 1 - 2 g/mL.

Additional Information

Gene ID	8805
Other Names	Transcription intermediary factor 1-alpha, TIF1-alpha, 6.3.2.-, E3 ubiquitin-protein ligase TRIM24, RING finger protein 82, Tripartite motif-containing protein 24, TRIM24, RNF82, TIF1, TIF1A
Target/Specificity	TRIM24; At least two isoforms of TRIM24 are known to exist.
Reconstitution & Storage	TRIM24 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	TRIM24 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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

TRIM24 Antibody: TRIM24 (TIF1), a member of the tripartite motif (TRIM) family, plays a role in the regulation of cell proliferation and apoptosis. TRIM24 localizes to nuclear bodies and is thought to associate with chromatin and heterochromatin-associated factors. The TRIM motif includes three zinc-binding domains (RING, B-box type 1 and B-box type 2) and a coiled-coil region. TIF1 mediates transcriptional events by interactions with the AF2 region of several nuclear receptors, such as the estrogen, retinoic acid and vitamin D3 receptors. Defects in TRIM24 are a cause of thyroid papillary carcinoma (TPC).

References

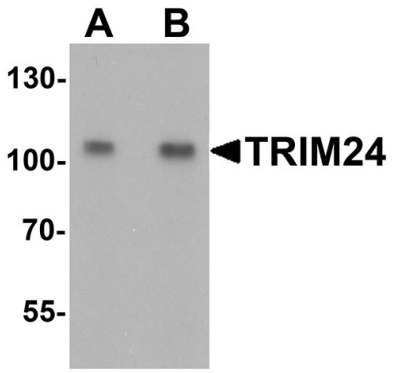
Fraser RA, Heard DJ, Adam S, et al. The putative cofactor TIF1 is a protein kinase that is hyperphosphorylated upon interaction with liganded nuclear receptors. J. Biol. Chem. 1998; 273:16199-204.

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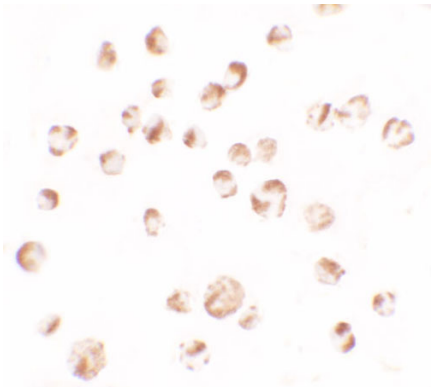
Herquel B, Ouararhni K, Khetchoumian K, et al. Transcription cofactors TRIM24, TRIM28, and TRIM33 associate to form regulatory complexes that suppress murine hepatocellular carcinoma. Proc. Natl. Acad. Sci. USA 2011; 108:8212-7.

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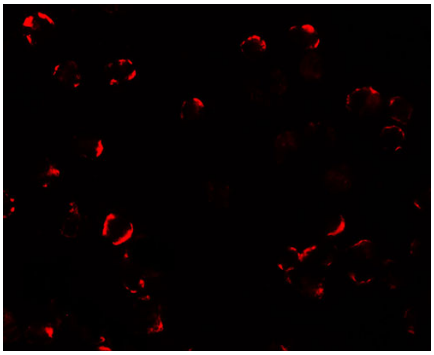
Images



Western blot analysis of TRIM24 in EL4 cell lysate with TRIM24 antibody at (A) 0.5 and (B) 1 µg/mL.



Immunocytochemistry of TRIM24 in EL4 cells with TRIM24 antibody at 2.5 µg/ml.



Immunofluorescence of TRIM24 in EL4 cells with TRIM24 antibody at 20 µg/ml.

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