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TRAIP Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2820b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9BWF2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB17368
Calculated MW	53294
Antigen Region	328-356

Additional Information

Gene ID	10293
Other Names	E3 ubiquitin-protein ligase TRAIP, 632-, RING finger protein 206, TRAF-interacting protein, TRAIP, RNF206, TRIP
Target/Specificity	This TRAIP antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 328-356 amino acids from the C-terminal region of human TRAIP.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TRAIP Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TRAIP {ECO:0000303|PubMed:26595769, ECO:0000312|HGNC:HGNC:30764}
Function	E3 ubiquitin ligase required to protect genome stability in response to replication stress (PubMed:25335891, PubMed:26595769, PubMed:26711499, PubMed:26781088, PubMed:27462463, PubMed:31545170). Acts as a key regulator of interstrand cross-link repair, which takes place when both

strands of duplex DNA are covalently tethered together, thereby blocking replication and transcription (By similarity). Controls the choice between the two pathways of replication-coupled interstrand-cross-link repair by mediating ubiquitination of MCM7 subunit of the CMG helicase complex (By similarity). Short ubiquitin chains on MCM7 promote recruitment of DNA glycosylase NEIL3 (By similarity). If the interstrand cross-link cannot be cleaved by NEIL3, the ubiquitin chains continue to grow on MCM7, promoting the unloading of the CMG helicase complex by the VCP/p97 ATPase, enabling the Fanconi anemia DNA repair pathway (By similarity). Only catalyzes ubiquitination of MCM7 when forks converge (By similarity). Also involved in the repair of covalent DNA-protein cross-links (DPCs) during DNA synthesis: promotes ubiquitination of DPCs, leading to their degradation by the proteasome (By similarity). Has also been proposed to play a role in promoting translesion synthesis by mediating the assembly of 'Lys-63'-linked poly-ubiquitin chains on the Y-family polymerase POLN in order to facilitate bypass of DNA lesions and preserve genomic integrity (PubMed:24553286). The function in translesion synthesis is however controversial (PubMed:26595769). Acts as a regulator of the spindle assembly checkpoint (PubMed:25335891). Also acts as a negative regulator of innate immune signaling by inhibiting activation of NF-kappa-B mediated by TNF (PubMed:22945920). Negatively regulates TLR3/4- and RIG-I-mediated IRF3 activation and subsequent IFNB1 production and cellular antiviral response by promoting 'Lys-48'-linked polyubiquitination of TNK1 leading to its proteasomal degradation (PubMed:22945920).

Cellular Location

Nucleus, nucleoplasm. Nucleus, nucleolus. Chromosome. Cytoplasm Cytoplasm, perinuclear region. Note=In the nucleus, found in close proximity to PCNA, suggesting localization at replication foci (PubMed:26595769). Localizes to DNA damage sites in response to replication stress (PubMed:26595769, PubMed:26711499, PubMed:26781088).

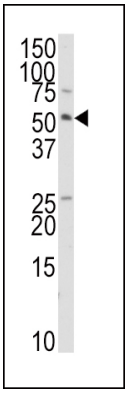
Background

TRAIP is a protein that contains an N-terminal RING finger motif and a putative coiled-coil domain. A similar murine protein interacts with TNFR-associated factor 1 (TRAF1), TNFR-associated factor 2 (TRAF2), and cylindromatosis. The interaction with TRAF2 inhibits TRAF2-mediated nuclear factor kappa-B, subunit 1 activation that is required for cell activation and protection against apoptosis.

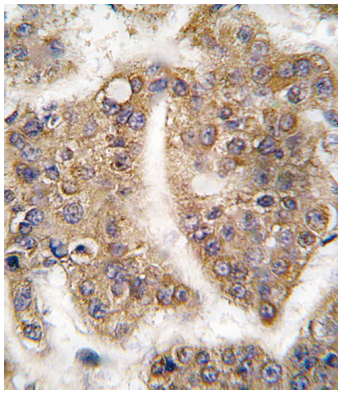
References

Wu,C., Proteomics 7 (11), 1775-1785 (2007) Regamey,A., J. Exp. Med. 198 (12), 1959-1964 (2003)

Images



Western blot analysis of anti-TRAIP Antibody (C-term) (Cat.#AP2820b) in HepG2 cell line lysates (35ug/lane). TRAIP(arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with TRAIP antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.