

TRIP12 Antibody
Catalog # ASC11848**Specification**

TRIP12 Antibody - Product Information

Application	WB, IHC, IF
Primary Accession	Q14669
Other Accession	NP_004229 , 10863903
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 219 kDa

Application Notes	Observed: 220 kDa KDa TRIP12 antibody can be used for detection of TRIP12 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.
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TRIP12 Antibody - Additional Information

Gene ID **9320**

Target/Specificity

TRIP12; TRIP12 antibody is human, mouse and rat reactive. At least four isoforms are known to exist.

Reconstitution & Storage

TRIP12 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

TRIP12 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TRIP12 Antibody - Protein Information

Name TRIP12

Synonyms KIAA0045, ULF

Function

E3 ubiquitin-protein ligase involved in ubiquitin fusion degradation (UFD) pathway and regulation of DNA repair (PubMed:19028681, PubMed:22884692). Part of the ubiquitin fusion degradation (UFD) pathway, a process that mediates ubiquitination of protein at their N-terminus, regardless of the presence of lysine residues in target proteins (PubMed:19028681). Acts as a key regulator of DNA damage response by acting as a

suppressor of RNF168, an E3 ubiquitin-protein ligase that promotes accumulation of 'Lys-63'-linked histone H2A and H2AX at DNA damage sites, thereby acting as a guard against excessive spreading of ubiquitinated chromatin at damaged chromosomes (PubMed:22884692). In normal cells, mediates ubiquitination and degradation of isoform p19ARF/ARF of CDKN2A, a lysine-less tumor suppressor required for p53/TP53 activation under oncogenic stress (PubMed:20208519). In cancer cells, however, isoform p19ARF/ARF and TRIP12 are located in different cell compartments, preventing isoform p19ARF/ARF ubiquitination and degradation (PubMed:20208519). Does not mediate ubiquitination of isoform p16-INK4a of CDKN2A (PubMed:20208519). Also catalyzes ubiquitination of NAE1 and SMARCE1, leading to their degradation (PubMed:18627766). Ubiquitination and degradation of target proteins is regulated by interaction with proteins such as MYC, TRADD or SMARCC1, which disrupt the interaction between TRIP12 and target proteins (PubMed:20829358). Mediates ubiquitination of ASXL1: following binding to N(6)-methyladenosine methylated DNA, ASXL1 is ubiquitinated by TRIP12, leading to its degradation and subsequent inactivation of the PR-DUB complex (PubMed:30982744).

Cellular Location

Nucleus, nucleoplasm

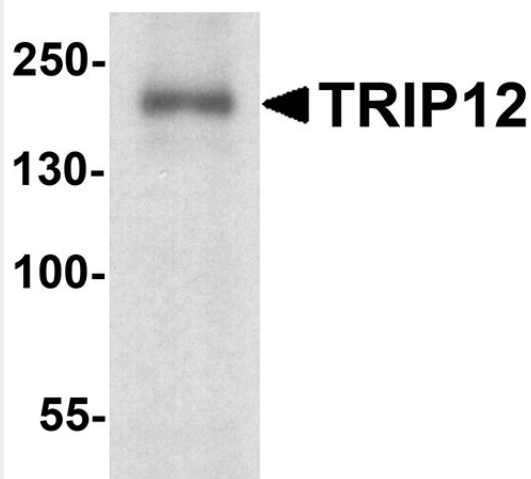
TRIP12 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

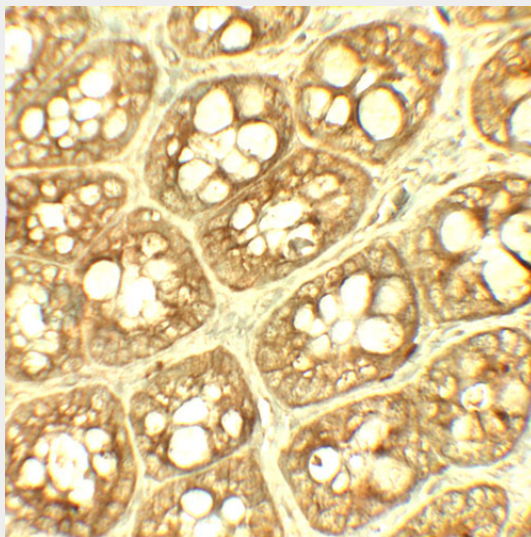
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

TRIP12 Antibody - Images

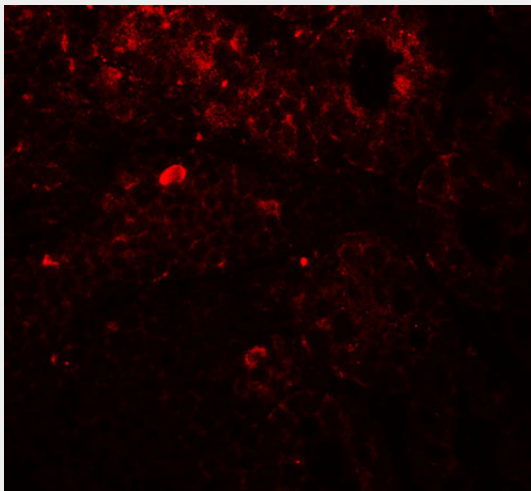




Western blot analysis of TRIP12 in rat colon tissue lysate with TRIP12 antibody at 1 μ g/ml.



Immunohistochemistry of TRIP12 in rat colon tissue with TRIP12 antibody at 5 μ g/ml.



Immunofluorescence of TRIP12 in rat colon tissue with TRIP12 antibody at 20 μ g/ml.

TRIP12 Antibody - Background

Thyroid hormone receptors (TRs) are transcription factors that regulate the expression of specific genes in a hormone-dependent manner (1). TRIP12 (thyroid hormone receptor interactor 12) is an ATP-dependent E3 ubiquitin ligase involved in the human ubiquitin fusion degradation (UFD) pathway and also modulates the NEDD8 pathway (2,3). TRIP12 contains one WWE domain and a single HECT (E6AP-type E3 ubiquitin-protein ligase) domain suggested to contain a noncovalent ubiquitin-binding site (4). TRIP12 acts as a key regulator of DNA damage response and the ubiquitin ligase activity of TRIP12 is essential for mouse development (5).

TRIP12 Antibody - References

Lee JW, Choi HS, Gyuris J, et al. Two classes of proteins dependent on either the presence or absence of thyroid hormone for interaction with the thyroid hormone receptor. *Mol. Endocrinol.* 1995; 9:243-54.

An CI, Ganio E, and Hagiwara N. Trip12, a HECT domain E3 ubiquitin ligase, targets Sox6 for proteasomal degradation and affects fiber type-specific gene expression in muscle cells. *Skelet. Muscle* 2013; 3:11.

Poulsen EG, Steinhauer C, Lees M, et al. HUWE1 and TRIP12 collaborate in degradation of ubiquitin-fusion proteins and misframed ubiquitin. *PLoS One.* 2012; 7:e50548.

Park Y, Yoon SK, and Yoon JB. The HECT domain of TRIP12 ubiquitinates substrates of the ubiquitin fusion degradation pathway. *J. Biol. Chem.* 2009; 284:1540-9.