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TRIM25 Antibody

Catalog # ASC10577

Product Information

Application	WB, IF, ICC, E
Primary Accession	Q14258
Other Accession	NP_005073, 68160937
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	70973
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TRIM25 antibody can be used for detection of TRIM25 by Western blot at 1 g/mL. Antibody can also be used for immunocytochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	7706
Other Names	E3 ubiquitin/ISG15 ligase TRIM25, 6.3.2.19, 6.3.2.n3, Estrogen-responsive finger protein, RING finger protein 147, Tripartite motif-containing protein 25, Ubiquitin/ISG15-conjugating enzyme TRIM25, Zinc finger protein 147, TRIM25, EFP, RNF147, ZNF147
Target/Specificity	TRIM25;
Reconstitution & Storage	TRIM25 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TRIM25 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TRIM25
Synonyms	EFP {ECO:0000303|PubMed:8248217}, RNF147
Function	Functions as a ubiquitin E3 ligase and as an ISG15 E3 ligase (PubMed:16352599). Involved in innate immune defense against viruses by mediating ubiquitination of RIGI and IFIH1 (PubMed:17392790, PubMed:29357390, PubMed:30193849, PubMed:31710640, PubMed:33849980, PubMed:36045682, PubMed:40719442). Mediates

	'Lys-63'-linked polyubiquitination of the RIGI N-terminal CARD-like region and may play a role in signal transduction that leads to the production of interferons in response to viral infection (PubMed:17392790, PubMed:23950712). Mediates 'Lys-63'-linked polyubiquitination of IFIH1 (PubMed:30193849). Promotes ISGylation of 14-3-3 sigma (SFN), an adapter protein implicated in the regulation of a large spectrum signaling pathway (PubMed:16352599, PubMed:17069755). Mediates estrogen action in various target organs (PubMed:22452784). Mediates the ubiquitination and subsequent proteasomal degradation of ZFHX3 (PubMed:22452784). Plays a role in promoting the restart of stalled replication forks via interaction with the KHDC3L-OOEP scaffold and subsequent ubiquitination of BLM, resulting in the recruitment and retainment of BLM at DNA replication forks (By similarity). Plays an essential role in the antiviral activity of ZAP/ZC3HAV1; an antiviral protein which inhibits the replication of certain viruses. Mechanistically, mediates 'Lys-63'-linked polyubiquitination of ZAP/ZC3HAV1 that is required for its optimal binding to target mRNA (PubMed:28060952, PubMed:28202764). Also mediates the ubiquitination of various substrates implicated in stress granule formation, nonsense- mediated mRNA decay, nucleoside synthesis and mRNA translation and stability (PubMed:36067236). Participates in autophagy suppression by ubiquitinating and degrading p62/SQSTM1 (PubMed:40542578).
Cellular Location	Cytoplasm. Cytoplasm, Stress granule. Nucleus {ECO:0000250|UniProtKB:Q61510}
Tissue Location	Expressed in breast tumors (at protein level). Ubiquitous.

Background

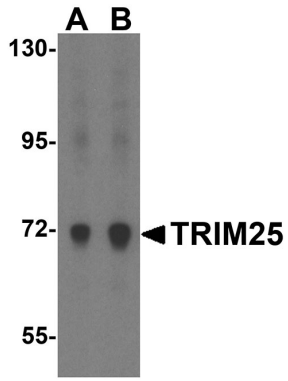
TRIM25 Antibody: TRIM25, also known as estrogen responsive finger protein (EFP) is a member of the RING finger-B box-coiled coil family and is a downstream target of estrogen receptor a. Mice lacking this gene displayed an underdeveloped uterus and reduced estrogen responsiveness demonstrating that this protein is essential for estrogen dependent proliferation. TRIM25 expression is increased in breast carcinoma where it promotes the growth of breast tumor by functioning as an E3 ubiquitin ligase that targets the negative cell cycle checkpoint 14-3-3s. Recent reports have indicated that TRIM25 E3 ubiquitin ligase is essential for the retinoic-acid-inducible gene 1 (RIG-1) signaling pathway to elicit host antiviral innate immunity.

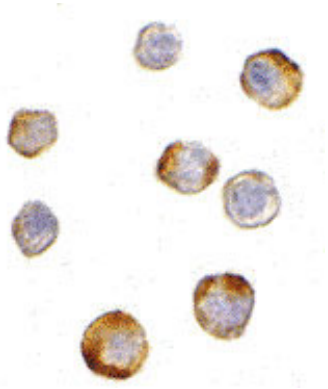
References

Inoue S, Orimo A, Hosoi T, et al. Genomic binding-site cloning reveals an estrogen-responsive gene that encodes a RING finger protein. Proc. Natl. Acad. Sci. USA1993; 11117-20.
Orimo A, Inoue S, Minowa O, et al. Underdeveloped uterus and reduced estrogen responsiveness in mice with disruption of the estrogen-responsive finger protein gene, which is a direct target of estrogen receptor a. Proc. Natl. Acad. Sci. USA1999; 96:12027-32.
Thomson SD, Ali S, Pickles L, et al. Analysis of estrogen-responsive finger protein expression in benign and malignant human breast. Int. J. Cancer2001; 91:152-8.
Urano T, Saito T, Tsukui T, et al. Efp targets 14-3-3s for proteolysis and promotes breast tumour growth. Nature2002; 417:871-5.

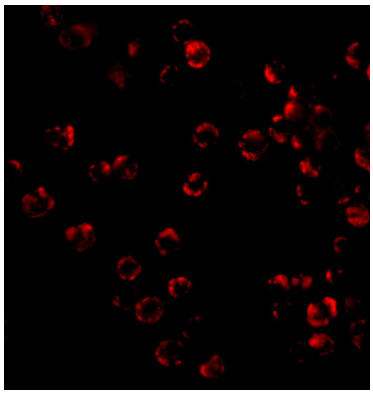
Images

Western blot analysis of TRIM25 in HeLa cell lysate with TRIM25 antibody at (A) 0.5 and (B) 1 µg/mL.





Immunocytochemistry of TRIM25 in HeLa cells with TRIM25 antibody at 5 µg/mL.



Immunofluorescence of TRIM25 in HeLa cells with TRIM25 antibody at 20 µg/mL.

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