

TRIM5 Antibody

Rabbit Polyclonal Antibody Catalog # ALS12964

Specification

TRIM5 Antibody - Product Information

Application IHC
Primary Accession O9C035
Reactivity Human, Monkey
Host Rabbit
Clonality Polyclonal
Calculated MW 56kDa KDa

TRIM5 Antibody - Additional Information

Gene ID 85363

Other Names

Tripartite motif-containing protein 5, 6.3.2.-, RING finger protein 88, TRIM5, RNF88

Target/Specificity

synthetic peptide corresponding to amino acids near the mid-region of rhesus monkey TRIM5a

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions

TRIM5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TRIM5 Antibody - Protein Information

Name TRIM5

Synonyms RNF88

Function

Capsid-specific restriction factor that prevents infection from non-host-adapted retroviruses. Blocks viral replication early in the life cycle, after viral entry but before reverse transcription. In addition to acting as a capsid-specific restriction factor, also acts as a pattern recognition receptor that activates innate immune signaling in response to the retroviral capsid lattice. Binding to the viral capsid triggers its E3 ubiquitin ligase activity, and in concert with the heterodimeric ubiquitin conjugating enzyme complex UBE2V1- UBE2N (also known as UBC13-UEV1A complex) generates 'Lys-63'-linked polyubiquitin chains, which in turn are catalysts in the autophosphorylation of the MAP3K7/TAK1 complex (includes TAK1, TAB2, and TAB3). Activation of the MAP3K7/TAK1 complex by autophosphorylation results in the induction and expression of NF-kappa-B and MAPK-responsive inflammatory genes, thereby leading to an innate immune response in the infected cell. Restricts infection by N-tropic murine leukemia virus (N-MLV), equine infectious anemia virus (EIAV), simian immunodeficiency virus of macaques (SIVmac), feline immunodeficiency virus (FIV),





and bovine immunodeficiency virus (BIV) (PubMed:17156811). Plays a role in regulating autophagy through activation of autophagy regulator BECN1 by causing its dissociation from its inhibitors BCL2 and TAB2 (PubMed:25127057). Also plays a role in autophagy by acting as a selective autophagy receptor which recognizes and targets HIV-1 capsid protein p24 for autophagic destruction (PubMed:25127057).

Cellular Location

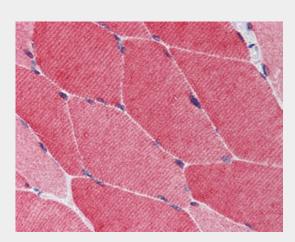
Cytoplasm. Nucleus {ECO:0000250|UniProtKB:Q0PF16}. Note=Predominantly localizes in cytoplasmic bodies (PubMed:12878161, PubMed:20357094). Localization may be influenced by the coexpression of other TRIM proteins, hence partial nuclear localization is observed in the presence of TRIM22 or TRIM27 (By similarity). In cytoplasmic bodies, colocalizes with proteasomal subunits and SQSTM1 (By similarity). {ECO:0000250|UniProtKB:Q0PF16, ECO:0000269|PubMed:12878161, ECO:0000269|PubMed:20357094, ECO:0000269|PubMed:25127057}

TRIM5 Antibody - Protocols

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

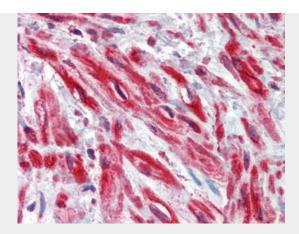
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TRIM5 Antibody - Images



Anti-TRIM5 antibody IHC of human skeletal muscle.





Anti-TRIM5 antibody IHC of human prostate, stroma.

TRIM5 Antibody - Background

Capsid-specific restriction factor that prevents infection from non-host-adapted retroviruses. Blocks viral replication early in the life cycle, after viral entry but before reverse transcription. In addition to acting as a capsid-specific restriction factor, also acts as a pattern recognition receptor that activates innate immune signaling in response to the retroviral capsid lattice. Binding to the viral capsid triggers its E3 ubiquitin ligase activity, and in concert with the heterodimeric ubiquitin conjugating enzyme complex UBE2V1-UBE2N (also known as UBC13-UEV1A complex) generates 'Lys-63'-linked polyubiquitin chains, which in turn are catalysts in the autophosphorylation of the MAP3K7/TAK1 complex (includes TAK1, TAB2, and TAB3). Activation of the MAP3K7/TAK1 complex by autophosphorylation results in the induction and expression of NF- kappa-B and MAPK-responsive inflammatory genes, thereby leading to an innate immune response in the infected cell. Restricts infection by N-tropic murine leukemia virus (N-MLV) and equine infectious anemia virus (EIAV).

TRIM5 Antibody - References

Reymond A.,et al.EMBO J. 20:2140-2151(2001). Yap M.W.,et al.Proc. Natl. Acad. Sci. U.S.A. 101:10786-10791(2004). Sawyer S.L.,et al.Curr. Biol. 16:95-100(2006). Yamauchi K.,et al.FEBS J. 275:1540-1555(2008). Battivelli E.,et al.J. Virol. 85:7828-7835(2011).