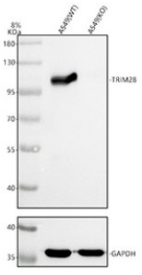
TRIM28 Antibody / Transcription Intermediary Factor 1-beta Antibody (R32210)

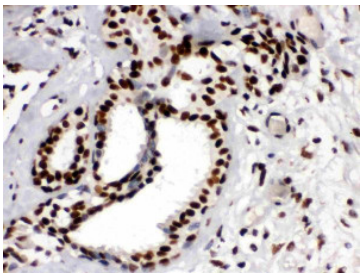
Catalog No.	Formulation	Size
R32210	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

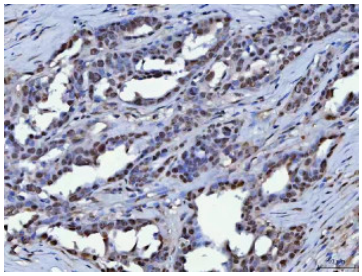
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	Q13263
Localization	Nuclear
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Flow cytometry: 1-3ug/million cells Immunofluorescence: 5ug/ml
Limitations	This TRIM28 Antibody / Transcription Intermediary Factor 1-beta Antibody is available for research use only.



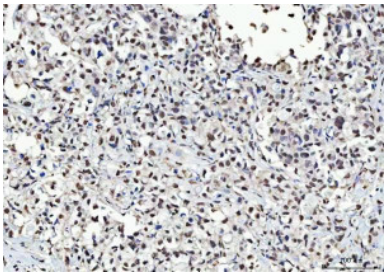
TRIM28 Antibody WB Analysis of Human A549 WT and TRIM28 KO Cells. Western blot analysis of wild-type (WT) A549 cell lysate (lane 1) and TRIM28 knockout (KO) A549 cell lysate (lane 2) using Transcription Intermediary Factor 1-beta Antibody. A prominent immunoreactive band near 100 kDa is detected in WT cells but is not detected in TRIM28 KO cells, supporting antibody specificity. GAPDH served as the loading control.



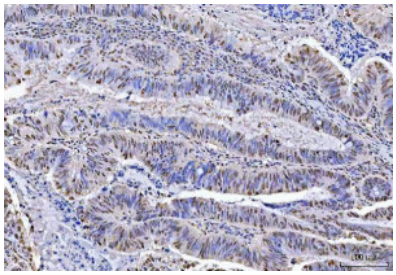
TRIM28 Antibody IHC Analysis of Human Breast Cancer Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded human breast cancer tissue using Transcription Intermediary Factor 1-beta Antibody. Strong brown DAB staining is observed predominantly in tumor cell nuclei, consistent with the nuclear localization of TRIM28. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0).



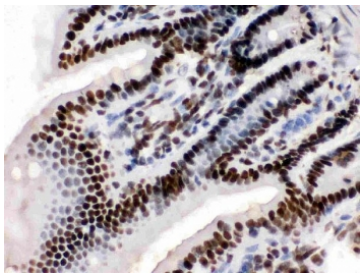
TRIM28 Antibody IHC Analysis of Human Ovarian Cancer Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded human ovarian cancer tissue using Transcription Intermediary Factor 1-beta Antibody. Brown DAB staining is observed in tumor cell nuclei, demonstrating nuclear TRIM28 immunoreactivity within the examined tissue. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0).



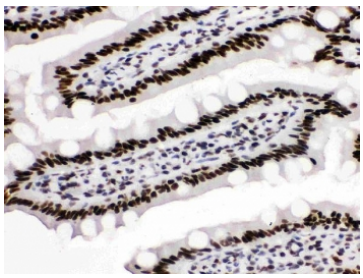
TRIM28 Antibody IHC Analysis of Human Gastric Carcinoma Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded human gastric carcinoma tissue using Transcription Intermediary Factor 1-beta Antibody. Brown DAB staining is observed in nuclei distributed throughout the tumor tissue, consistent with TRIM28-associated nuclear immunoreactivity. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0).



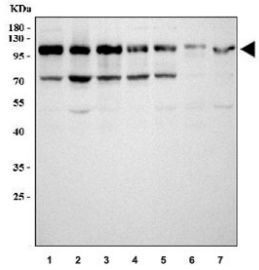
TRIM28 Antibody IHC Analysis of Human Colorectal Adenocarcinoma Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded human colorectal adenocarcinoma tissue using Transcription Intermediary Factor 1-beta Antibody. Brown DAB staining is observed in nuclei of gland-forming tumor cells, demonstrating nuclear TRIM28 immunoreactivity within the malignant epithelial structures. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0).



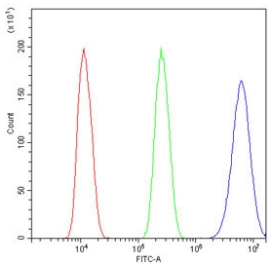
TRIM28 Antibody IHC Analysis of Mouse Intestinal Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded mouse intestinal tissue using Transcription Intermediary Factor 1-beta Antibody. Strong brown DAB staining is observed in nuclei of intestinal epithelial cells, including cells lining the intestinal glands. The staining pattern is consistent with the nuclear localization of TRIM28. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0).



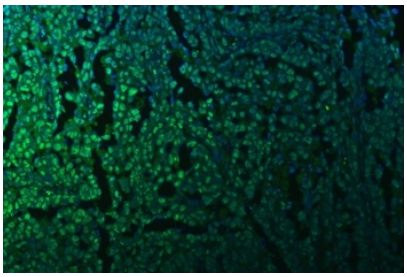
TRIM28 Antibody IHC Analysis of Rat Intestinal Tissue. Immunohistochemical analysis of formalin-fixed, paraffin-embedded rat intestinal tissue using Transcription Intermediary Factor 1-beta Antibody. Strong brown DAB staining is observed in nuclei of intestinal epithelial cells, including cells within glandular structures. The staining demonstrates nuclear TRIM28 immunoreactivity in rat intestinal tissue. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0).



TRIM28 Antibody WB Analysis of Human, Rat, and Mouse Samples. Western blot analysis using Transcription Intermediary Factor 1-beta Antibody. Samples include human HeLa (lane 1), PC-3 (lane 2), 293T (lane 3), and A549 (lane 4) cell lysates; rat PC-12 cell lysate (lane 5); mouse spleen lysate (lane 6); and mouse NIH 3T3 cell lysate (lane 7). Immunoreactive bands are observed at approximately 88-110 kDa. TRIM28 has a calculated molecular weight of approximately 89 kDa and is subject to post-translational modifications, including SUMOylation, although the detected bands have not been confirmed as specific modified forms.



TRIM28 Antibody FACS Staining of Human U-2 OS Cells. Flow cytometry analysis of human U-2 OS cells using Transcription Intermediary Factor 1-beta Antibody at 1 ug per million cells. The antibody-stained population (blue) shows a clear rightward fluorescence shift relative to the isotype control (green) and unlabeled cells (red), demonstrating increased TRIM28-associated staining.



TRIM28 Antibody IF Analysis of Human Ovarian Cancer Tissue. Immunofluorescence analysis of formalin-fixed, paraffin-embedded human ovarian cancer tissue using Transcription Intermediary Factor 1-beta Antibody. Green fluorescence is observed predominantly in cell nuclei, consistent with the nuclear localization of TRIM28. DAPI was used for blue nuclear counterstaining. Heat-induced epitope retrieval was performed using EDTA buffer (pH 8.0).

Description

TRIM28 Antibody / Transcription Intermediary Factor 1-beta Antibody targets TRIM28, a nuclear transcriptional corepressor also known as KAP1, TIF1-beta, and KRAB-associated protein 1. TRIM28 belongs to the tripartite motif protein family and functions as an important regulator of chromatin organization, transcriptional repression, and genome stability. The protein contains an N-terminal RBCC region comprising a RING finger, B-box domains, and a coiled-coil region, together with C-terminal regulatory domains that coordinate interactions with chromatin-associated proteins.

One of the best-characterized functions of TRIM28 is its association with KRAB domain-containing zinc finger transcription factors. Through these interactions, TRIM28 is recruited to specific genomic regions where it assembles transcriptional repression complexes. These complexes include the histone methyltransferase SETDB1, heterochromatin protein 1 (HP1), and other chromatin-modifying factors. Their coordinated activity promotes histone H3 lysine 9 trimethylation and the establishment of transcriptionally repressive chromatin.

TRIM28 contributes to the silencing of endogenous retroelements and other repetitive genomic sequences. This activity is particularly important during early development, when inappropriate retroelement expression can disrupt transcriptional programs and genome integrity. TRIM28 also participates in the regulation of cellular differentiation, proliferation, and developmental gene expression through its effects on chromatin accessibility and transcriptional control.

Post-translational modifications regulate TRIM28 activity. SUMOylation promotes interactions with transcriptional repression machinery, while phosphorylation can alter its association with chromatin and regulatory proteins. Phosphorylation of TRIM28 at serine 824 is associated with the cellular response to DNA double-strand breaks and contributes to chromatin relaxation during DNA repair. Additional phosphorylation events influence transcriptional regulation and cellular stress responses.

TRIM28 has also been implicated in cancer biology through its involvement in epigenetic regulation, cell proliferation, and

the maintenance of transcriptional programs. Altered TRIM28 expression has been investigated in multiple malignancies, although its biological effects depend on cellular context and interacting regulatory pathways.

Research involving TRIM28 Antibody can help characterize the distribution and regulation of this transcriptional corepressor. Understanding TRIM28 function provides insight into the relationships between chromatin organization, epigenetic silencing, DNA damage signaling, and the maintenance of genome stability.

TRIM28 functions as a transcriptional corepressor that regulates chromatin organization, epigenetic silencing, and cellular responses to DNA damage. Researchers investigating transcriptional regulation, chromatin-associated proteins, and genome stability can explore our Cell Biology Antibodies collection for additional research antibodies.

Application Notes

Optimal dilution of the TRIM28 Antibody / Transcription Intermediary Factor 1-beta Antibody should be determined by the researcher.

Immunogen

Amino acids 699-835 of human TRIM28 were used as the immunogen for the TRIM28 antibody.

Storage

After reconstitution, the TRIM28 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

KAP1 antibody, KRAB-associated protein 1 antibody, Transcription intermediary factor 1-beta antibody, TIF1-beta antibody, TIF1B antibody, Tripartite motif-containing protein 28 antibody, KRAB-associated protein 1 transcriptional corepressor antibody

References (1)

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