10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TRIM28 Antibody
Catalog # ASC10160

Specification

TRIM28 Antibody - Product Information

Application	**WB**
Primary Accession	Q13263
Other Accession	NP_005753, 5032179
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 92 kDa KDa**
Application Notes	**TRIM28 antibody can be used for detection of TRIM28 by Western blot at 1 - 2 µg/mL.**

TRIM28 Antibody - Additional Information

Gene ID **10155**

Other Names
TRIM28 Antibody: KAP1, TF1B, RNF96, TIF1B, KAP1, Transcription intermediary factor 1-beta, E3 SUMO-protein ligase TRIM28, TIF1-beta, tripartite motif containing 28

Target/Specificity
TRIM28; At least three isoforms of TRIM28 are known to exist; this antibody will detect all three isoforms

Reconstitution & Storage
TRIM28 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
TRIM28 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TRIM28 Antibody - Protein Information

Name TRIM28 (HGNC:16384)

Synonyms KAP1, RNF96, TIF1B

Function
Nuclear corepressor for KRAB domain-containing zinc finger proteins (KRAB-ZFPs). Mediates gene silencing by recruiting CHD3, a subunit of the nucleosome remodeling and deacetylation (NuRD) complex, and SETDB1 (which specifically methylates histone H3 at 'Lys-9' (H3K9me)) to the promoter regions of KRAB target genes. Enhances transcriptional repression by coordinating the increase in H3K9me, the decrease in histone H3 'Lys-9 and 'Lys-14' acetylation (H3K9ac and H3K14ac, respectively) and the disposition of HP1 proteins to silence gene expression. Recruitment of SETDB1 induces heterochromatinization. May play a role as a coactivator for CEBPB and NR3C1 in the transcriptional activation of ORM1. Also a corepressor for ERBB4. Inhibits

E2F1 activity by stimulating E2F1-HDAC1 complex formation and inhibiting E2F1 acetylation. May serve as a partial backup to prevent E2F1-mediated apoptosis in the absence of RB1. Important regulator of CDKN1A/p21(CIP1). Has E3 SUMO-protein ligase activity toward itself via its PHD-type zinc finger. Also specifically sumoylates IRF7, thereby inhibiting its transactivation activity. Ubiquitinates p53/TP53 leading to its proteasomal degradation; the function is enhanced by MAGEC2 and MAGEA2, and possibly MAGEA3 and MAGEA6. Mediates the nuclear localization of KOX1, ZNF268 and ZNF300 transcription factors. In association with isoform 2 of ZFP90, is required for the transcriptional repressor activity of FOXP3 and the suppressive function of regulatory T-cells (Treg) (PubMed:23543754). Probably forms a corepressor complex required for activated KRAS-mediated promoter hypermethylation and transcriptional silencing of tumor suppressor genes (TSGs) or other tumor-related genes in colorectal cancer (CRC) cells (PubMed:24623306). Required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed:24623306). In ESCs, in collaboration with SETDB1, is also required for H3K9me3 and silencing of endogenous and introduced retroviruses in a DNA-methylation independent-pathway (By similarity). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed:24623306). The SETDB1-TRIM28-ZNF274 complex may play a role in recruiting ATRX to the 3'-exons of zinc- finger coding genes with atypical chromatin signatures to establish or maintain/protect H3K9me3 at these transcriptionally active regions (PubMed:27029610).

Cellular Location
Nucleus Note=Associated with centromeric heterochromatin during cell differentiation through CBX1 (By similarity). Localizes to sites of DNA damage (PubMed:25593309). {ECO:0000250|UniProtKB:Q62318, ECO:0000269|PubMed:25593309}

Tissue Location
Expressed in all tissues tested including spleen, thymus, prostate, testis, ovary, small intestine, colon and peripheral blood leukocytes.

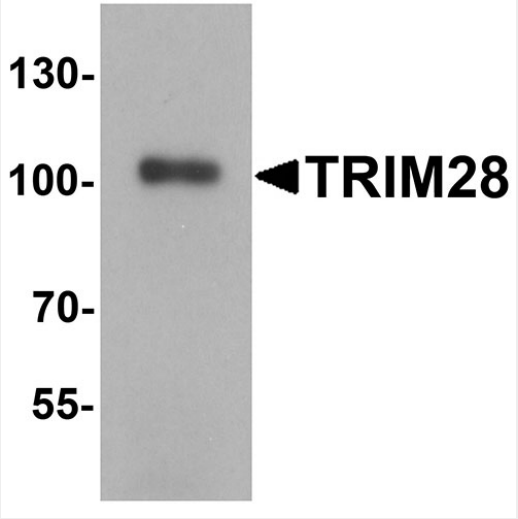
TRIM28 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TRIM28 Antibody - Images

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Western blot analysis of TRIM28 in human testis tissue lysate with TRIM28 antibody at 1 µg/mL.

TRIM28 Antibody - Background

TRIM28 Antibody: TRIM28, also known as KAP-1, is a member of the Transcriptional Intermediary Factor 1 (TIF1) subfamily and contains a RING finger, B box, Coiled coil, PHD/TTC, and bromodomain. TRIM28 is a corepressor for Kruppel-associated box (KRAB)-domain-containing zinc finger proteins and plays a critical role in early embryogenesis. TRIM28 acts as a transcriptional mediator by binding liganded nuclear receptors, including retinoic acid (RAR), retinoid X (RXR) and estrogen (ER) receptors. TRIM28 associates with both heterochromatin and euchromatin, causing gene silencing by both HP1 binding and histone deacetylation.

TRIM28 Antibody - References

Friedman JR, Fredericks WJ, Jensen DE, et al. KAP-1, a novel corepressor for the highly conserved KRAB repression domain. Genes Dev. 1996; 10:2067-78.
Cammas F, Mark M, Dolle P, et al. Mice lacking the transcriptional corepressor TIF1beta are defective in early postimplantation development. Dev. 2000; 127:2955-63.
Chang CJ, Chen YL, and Lee SC. Coactivator TIF1beta interacts with transcription factor C/EBPbeta and glucocorticoid receptor to induce alpha1-acid glycoprotein gene expression. Mol. Cell Biol. 1998; 18:5880-7
Groner AC, Meylan S, Ciuffi A, et al. KRAB-zinc finger proteins and KAP1 can mediate long-range transcriptional repression through heterochromatin spreading. PLoS Genet. 2010; 6:e1000869.