

KAP1 / TIF1 beta Antibody

Purified Mouse Monoclonal Antibody (Mab)

Catalog # AP52671

Product Information

Application	WB, ICC, IP, IHC
Primary Accession	Q13263
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	88550

Additional Information

Gene ID	10155
Other Names	E3 SUMO protein ligase TRIM28;E3 SUMO-protein ligase TRIM28;FLJ29029;KAP1;KAP-1;KRAB associated protein 1;KRAB interacting protein 1;KRAB-associated protein 1;KRAB-interacting protein 1;KRIP1;KRIP-1;KRIP1;Nuclear corepressor KAP 1;Nuclear corepressor KAP-1;RING finger protein 96;RNF96;TF1B;TIF1 beta;TIF1-beta;TIF1B;TIF1B_HUMAN;Transcription intermediary factor 1 beta;Transcription intermediary factor 1-beta; TRIM28;Tripartite motif containing 28;tripartite motif containing protein 28;Tripartite motif-containing protein 28.
Dilution	WB~~1:1000 ICC~~1:100 IP~~1:500 IHC~~1:100
Format	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.09% (W/V) sodium azide, 50% glycerol
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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.

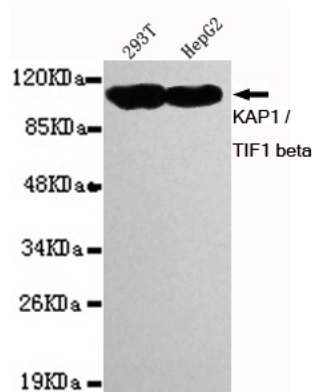
Background

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 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.

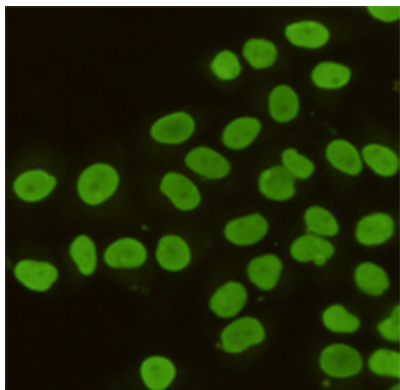
References

- Friedman J.R.,et al.Genes Dev. 10:2067-2078(1996).
 Moosmann P.R.,et al.Nucleic Acids Res. 24:4859-4867(1996).
 Emison E.S.,et al.Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
 Bienvenut W.V.,et al.Submitted (MAY-2006) to UniProtKB.
 Bienvenut W.V.,et al.Submitted (JAN-2010) to UniProtKB.

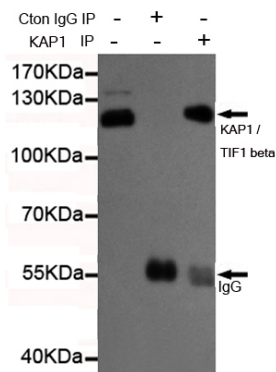
Images



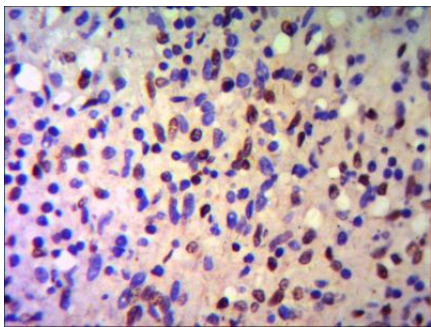
Western blot detection of KAP1 / TIF1 beta in 293T and HepG2 cell lysates using KAP1 / TIF1 beta mouse mAb (1:1000 diluted).Observed band size: 110KDa.



Immunocytochemistry staining of HeLa cells fixed with 4% Paraformaldehyde and using anti-KAP1 / TIF1 beta mouse mAb (dilution 1:100).



Immunoprecipitation analysis of Hela cell lysates using KAP1 / TIF1 beta mouse mAb.



IHC of paraffin-embedded human Spleen using anti-KAP1 / TIF1 beta diluted 1/500-1/1000.

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