

Anti-KAP1 Picoband Antibody
Catalog # ABO12521**Specification**

Anti-KAP1 Picoband Antibody - Product Information

Application	WB, IHC-P
Primary Accession	Q13263
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Transcription intermediary factor 1-beta (TRIM28) detection. Tested with WB, IHC-P in Human; Mouse; Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-KAP1 Picoband Antibody - Additional Information

Gene ID 10155

Other Names

Transcription intermediary factor 1-beta, TIF1-beta, E3 SUMO-protein ligase TRIM28, 6.3.2.-, KRAB-associated protein 1, KAP-1, KRAB-interacting protein 1, KRIP-1, Nuclear corepressor KAP-1, RING finger protein 96, Tripartite motif-containing protein 28, TRIM28, KAP1, RNF96, TIF1B

Calculated MW

88550 MW KDa

Application Details

Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization

Nucleus . Associated with centromeric heterochromatin during cell differentiation through CBX1. .

Tissue Specificity

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

Protein Name

Transcription intermediary factor 1-beta

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

E.coli-derived human KAP1 recombinant protein (Position: A699-P835). Human KAP1 shares 94.9%

amino acid (aa) sequence identity with both mouse and rat KAP1.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After r° Constitution, at 4°C for one month. It° Can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Anti-KAP1 Picoband 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

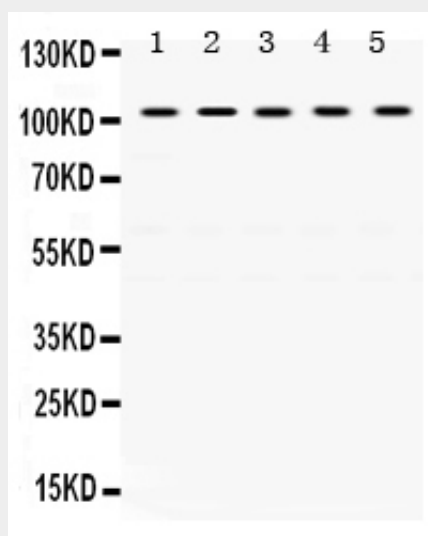
Expressed in all tissues tested including spleen, thymus, prostate, testis, ovary, small intestine, colon and peripheral blood leukocytes.

Anti-KAP1 Picoband Antibody - Protocols

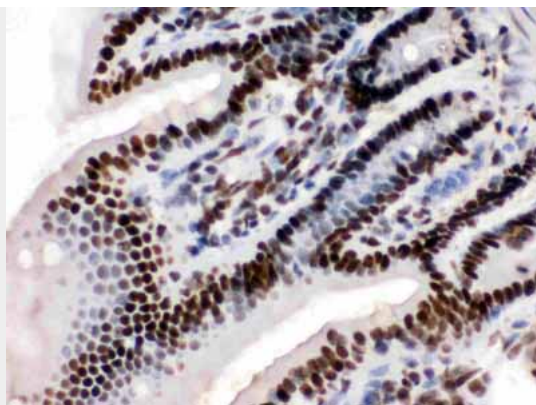
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

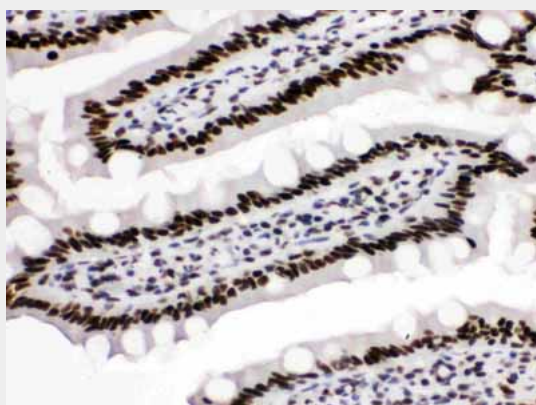
Anti-KAP1 Picoband Antibody - Images



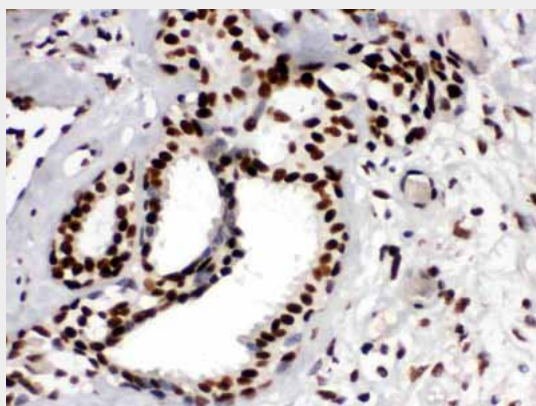
Anti-KAP1 Picoband antibody, ABO12521, Western blotting
All lanes: Anti KAP1 (ABO12521) at 0.5ug/ml
Lane 1: Rat Testis Tissue Lysate at 50ug
Lane 2: Rat Ovary Tissue Lysate at 50ug
Lane 3: SKOV Whole Cell Lysate at 40ug
Lane 4: COLO320 Whole Cell Lysate at 40ug
Lane 5: HELA Whole Cell Lysate at 40ug
Predicted bind size: 105KD
Observed bind size: 105KD



Anti-KAP1 Picoband antibody, ABO12521, IHC(P)IHC(P): Mouse Intestine Tissue



Anti-KAP1 Picoband antibody, ABO12521, IHC(P)IHC(P): Rat Intestine Tissue



Anti-KAP1 Picoband antibody, ABO12521, IHC(P)IHC(P): Human Mammary Cancer Tissue

Anti-KAP1 Picoband Antibody - Background

Tripartite motif-containing 28 (TRIM28), also known as transcriptional intermediary factor 1 β (TIF1 β) and KAP1 (KRAB-associated protein-1), is a protein that in humans is encoded by the TRIM28 gene. The protein encoded by this gene mediates transcriptional control by interaction with the Kruppel-associated box repression domain found in many transcription factors. The protein localizes to the nucleus and is thought to associate with specific chromatin regions. KAP1 is a ubiquitously expressed protein involved in many critical functions including: transcriptional regulation, cellular differentiation and proliferation, DNA damage repair, viral suppression, and apoptosis. Its functionality is dependent upon post-translational modifications. Phosphorylation of KAP1 acts as a deactivator of the protein in many of its mechanisms while sumoylation acts as an activator.