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

Anti-ZBTB7A Picoband Antibody

Catalog # ABO12595

Product Information

Application	WB, IHC-P
Primary Accession	O95365
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Zinc finger and BTB domain-containing protein 7A(ZBTB7A) detection. Tested with WB, IHC-P in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	51341
Other Names	Zinc finger and BTB domain-containing protein 7A, Factor binding IST protein 1, FBI-1, Factor that binds to inducer of short transcripts protein 1, HIV-1 1st-binding protein 1, Leukemia/lymphoma-related factor, POZ and Krueppel erythroid myeloid ontogenic factor, POK erythroid myeloid ontogenic factor, Pokemon, TTF-I-interacting peptide 21, TIP21, Zinc finger protein 857A, ZBTB7A, FBI1, LRF, ZBTB7, ZNF857A
Calculated MW	61439
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, By Heat Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Nucleus .
Tissue Specificity	Widely expressed. In normal thymus, expressed in medullary epithelial cells and Hassle's corpuscles (at protein level). In tonsil, expressed in squamous epithelium and germinal center lymphocytes (at protein level). Up-regulated in a subset of lymphomas, as well as in a subset of breast, lung, colon, prostate and bladder carcinomas (at protein level). .
Source	Eukaryota
Protein Name	Zinc finger and BTB domain-containing protein 7A
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ZBTB7A (125-163aa DLLDRQILAADAGADAGQLDLVDQIDQRNLLRAKEYLEF), different from the related mouse sequence by eleven amino acids, and from the related rat sequence by ten amino acids.
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.

Protein Information

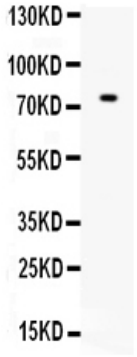
Name	ZBTB7A (HGNC:18078)
Function	Transcription factor that represses the transcription of a wide range of genes involved in cell proliferation and differentiation (PubMed:14701838, PubMed:17595526, PubMed:20812024, PubMed:25514493, PubMed:26455326, PubMed:26816381). Directly and specifically binds to the consensus sequence 5'-[GA][CA]GACCCCCCCCC-3' and represses transcription both by regulating the organization of chromatin and through the direct recruitment of transcription factors to gene regulatory regions (PubMed:12004059, PubMed:17595526, PubMed:20812024, PubMed:25514493, PubMed:26816381). Negatively regulates SMAD4 transcriptional activity in the TGF-beta signaling pathway through these two mechanisms (PubMed:25514493). That is, recruits the chromatin regulator HDAC1 to the SMAD4-DNA complex and in parallel prevents the recruitment of the transcriptional activators CREBBP and EP300 (PubMed:25514493). Collaborates with transcription factors like RELA to modify the accessibility of gene transcription regulatory regions to secondary transcription factors (By similarity). Also directly interacts with transcription factors like SP1 to prevent their binding to DNA (PubMed:12004059). Functions as an androgen receptor/AR transcriptional corepressor by recruiting NCOR1 and NCOR2 to the androgen response elements/ARE on target genes (PubMed:20812024). Thereby, negatively regulates androgen receptor signaling and androgen-induced cell proliferation (PubMed:20812024). Involved in the switch between fetal and adult globin expression during erythroid cells maturation (PubMed:26816381). Through its interaction with the NuRD complex regulates chromatin at the fetal globin genes to repress their transcription (PubMed:26816381). Specifically represses the transcription of the tumor suppressor ARF isoform from the CDKN2A gene (By similarity). Efficiently abrogates E2F1-dependent CDKN2A transactivation (By similarity). Regulates chondrogenesis through the transcriptional repression of specific genes via a mechanism that also requires histone deacetylation (By similarity). Regulates cell proliferation through the transcriptional regulation of genes involved in glycolysis (PubMed:26455326). Involved in adipogenesis through the regulation of genes involved in adipocyte differentiation (PubMed:14701838). Plays a key role in the differentiation of lymphoid progenitors into B and T lineages (By similarity). Promotes differentiation towards the B lineage by inhibiting the T-cell instructive Notch signaling pathway through the specific transcriptional repression of Notch downstream target genes (By similarity). Also regulates osteoclast differentiation (By similarity). May also play a role, independently of its transcriptional activity, in double-strand break repair via classical non-homologous end joining/cNHEJ (By similarity). Recruited to double-strand break sites on damage DNA, interacts with the DNA-dependent protein kinase complex and directly regulates its stability and activity in DNA repair (By similarity). May also modulate the splicing activity of KHDRBS1

	toward BCL2L1 in a mechanism which is histone deacetylase-dependent and thereby negatively regulates the pro-apoptotic effect of KHDRBS1 (PubMed:24514149).
Cellular Location	Nucleus. Note=Recruited to double-strand break sites of damaged DNA. {ECO:0000250|UniProtKB:O88939}
Tissue Location	Widely expressed (PubMed:9927193). In normal thymus, expressed in medullary epithelial cells and Hassle's corpuscles (at protein level) (PubMed:15662416). In tonsil, expressed in squamous epithelium and germinal center lymphocytes (at protein level) (PubMed:15662416). Up-regulated in a subset of lymphomas, as well as in a subset of breast, lung, colon, prostate and bladder carcinomas (at protein level) (PubMed:15662416). Expressed in adipose tissues (PubMed:14701838).

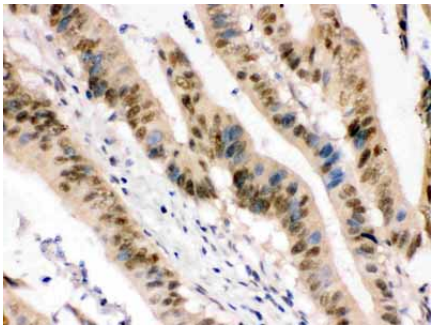
Background

Zinc finger and BTB domain-containing protein 7A is a protein that in humans is encoded by the ZBTB7A gene. ZBTB7A has a critical oncosuppressive role in the prostate. Prostate-specific inactivation of ZBTB7A leads to a marked acceleration of PTEN loss-driven prostate tumorigenesis through bypass of PTEN loss-induced cellular senescence. It has been showed that ZBTB7A physically interacts with SOX9 and functionally antagonizes its transcriptional activity on key target genes such as MIA, which is involved in tumor cell invasion, and H19, a long noncoding RNA precursor for an RB-targeting microRNA. Inactivation of ZBTB7A in vivo leads to RB downregulation, bypass of PTEN loss-induced cellular senescence, and invasive prostate cancer. Notably, it has been also found that ZBTB7A is genetically lost, as well as downregulated at both the mRNA and protein levels, in a subset of human advanced prostate cancers. Therefore, ZBTB7A is identified as a context-dependent cancer gene that can act as an oncogene in some contexts but that also has oncosuppressive-like activity in PTEN-null tumors.

Images



Western blot analysis of ZBTB7A expression in HELA whole cell lysates (lane 1). ZBTB7A at 75KD was detected using rabbit anti- ZBTB7A Antigen Affinity purified polyclonal antibody (Catalog # ABO12595) at0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .



ZBTB7A was detected in paraffin-embedded sections of human intestinal cancer tissues using rabbit anti- ZBTB7A Antigen Affinity purified polyclonal antibody (Catalog # ABO12595) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.