

Recombinant Human ZBTB7A Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. ZBTB7A-2914H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	ZBTB7A MS Standard C13 and N15-labeled recombinant protein (NP_056982) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	Transcription factor that represses the transcription of a wide range of genes involved in cell proliferation and differentiation. 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. Negatively regulates SMAD4 transcriptional activity in the TGF-beta signaling pathway through these two mechanisms. 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. Collaborates with transcription factors like RELA to modify the accessibility of gene transcription regulatory regions to secondary transcription factors. Also directly interacts with transcription factors like SP1 to prevent their binding to DNA. Functions as an androgen receptor/AR transcriptional corepressor by recruiting NCOR1 and NCOR2 to the androgen response elements/ARE on target genes. Thereby, negatively regulates androgen receptor signaling and androgen-induced cell proliferation. Involved in the switch between fetal and adult globin expression during erythroid cells maturation. Through its interaction with the NuRD

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complex regulates chromatin at the fetal globin genes to repress their transcription. Specifically represses the transcription of the tumor suppressor ARF isoform from the CDKN2A gene. Efficiently abrogates E2F1-dependent CDKN2A transactivation. Regulates chondrogenesis through the transcriptional repression of specific genes via a mechanism that also requires histone deacetylation. Regulates cell proliferation through the transcriptional regulation of genes involved in glycolysis. Involved in adipogenesis through the regulation of genes involved in adipocyte differentiation. Plays a key role in the differentiation of lymphoid progenitors into B and T lineages. 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. Also regulates osteoclast differentiation. May also play a role, independently of its transcriptional activity, in double-strand break repair via classical non-homologous end joining/cNHEJ. 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. 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.

Molecular Mass 61.3 kDa

AA Sequence

MAGGVDPGIPGPFDPHSSDILSGLNEQRTQGLLCDVVILVEGREFPTHRSVLAACSQ
YFKKLFTSGAVVDQQNVYEIDFVSAEALTALMDFAYTATLTVSTANVGDILSAARLLEI
PAVSHVCADLLDRQILAADAGADAGQLDLVDQIDQRNLLRAKEYLEFFQSNPMNSLP
PAAAAAASFPWSAFGASDDDLDATEAVAAVAAGAAGDCNGLDFYGPGPAAER
PPTGDGDEGDSNPGLWPERDEDAPTGGFLPPPVPAPPAATQNGHYGRGGEEEEAS
LSEAAPEPGDSPGFLSGAAEGEDGDGPDVDGLAASTLLQQMMSSVGRAGAAAGD
SDEESRADDKGVMDYYLKYFSGAHDGDVYPAWSQKVEKKIRAKAFQKCPICEKVIQ
GAGKLPRHIRTHTGEKPYECNICKVRFTQDKLVHMRKHTGEKPYLCQQCGAAFA
HNYDLKNHMRVHTGLRPYQCDSCCKTFVRSDDLHRLKKGDCNGVPSRRGRKPR

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VRGGAPDPSPGATATPGAPAQPSSPDARRNGQEKHFKDEDEDEDVASPDGLGRL
NVAGAGGGGDSGGGPGAATDGNFTAGLATRTRPLEQKLISEEDLAANDILDYKDDDKV

Purity > 80% as determined by SDS-PAGE and Coomassie blue staining

Stability Stable for 3 months from receipt of products under proper storage and handling conditions.

Storage Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

Concentration 50 µg/mL as determined by BCA

Storage Buffer 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name ZBTB7A zinc finger and BTB domain containing 7A [Homo sapiens (human)]

Official Symbol ZBTB7A

Synonyms ZBTB7A; zinc finger and BTB domain containing 7A; ZBTB7, zinc finger and BTB domain containing 7; zinc finger and BTB domain-containing protein 7A; DKFZp547O146; FBI 1; LRF; lymphoma related factor; pokemon; HIV 1 inducer of short transcripts binding protein; ZNF857A; TIP21; zinc finger protein 857A; HIV-1 1st-binding protein 1; TTF-I-interacting peptide 21; factor binding IST protein 1; leukemia/lymphoma-related factor; POK erythroid myeloid ontogenic factor; HIV-1 inducer of short transcripts binding protein; POZ and Krueppel erythroid myeloid ontogenic factor; factor that binds to inducer of short transcripts protein 1; zinc finger and BTB domain containing 7A, HIV-1 inducer of short transcripts binding protein; FBI1; FBI-1; ZBTB7; MGC99631;

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Gene ID	51341
mRNA Refseq	NM_015898
Protein Refseq	NP_056982
MIM	605878
UniProt ID	O95365
SDS-PAGE	