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# Anti-ZNHIT1 Antibody

Catalog # AP51884

## Product Information

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| **Application** | WB |
| **Primary Accession** | O43257 |
| **Reactivity** | Human, Mouse, Rat, Bovine |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 17536 |

## Additional Information

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| **Gene ID** | 10467 |
| **Other Names** | CGBP1; ZNFN4A1; Zinc finger HIT domain-containing protein 1; Cyclin-G1-binding protein 1; Zinc finger protein subfamily 4A member 1; p18 Hamlet |
| **Target/Specificity** | KLH-conjugated synthetic peptide encompassing a sequence within the center region of human ZNHIT1. The exact sequence is proprietary. |
| **Dilution** | WB~~WB (1/500 - 1/1000) |
| **Format** | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## Protein Information

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| **Name** | ZNHIT1 |
| **Synonyms** | CGBP1, ZNFN4A1 |
| **Function** | Plays a role in chromatin remodeling by promoting the incorporation of histone variant H2AZ1/H2A.Z into the genome to regulate gene expression (PubMed:20473270, PubMed:35175558). Promotes SRCAP complex-mediated deposition of histone variant H2AZ1 to lymphoid fate regulator genes, enhancing lymphoid lineage commitment (By similarity). Recruited to the promoter of the transcriptional activator MYOG at the early stages of muscle differentiation where it mediates binding of histone H2AZ1 to chromatin and induces muscle-specific gene expression (PubMed:20473270). Maintains hematopoietic stem cell (HSC) quiescence by determining the chromatin accessibility at distal enhancers of HSC quiescence genes such as PTEN, FSTL1 and KLF4, enhancing deposition of H2AZ1 to promote their sustained transcription and restricting PI3K-AKT signaling inhibition (By similarity). Plays |

a role in intestinal stem cell maintenance by promoting H2AZ1 deposition at the transcription start sites of genes involved in intestinal stem cell fate determination including LGR5, TGFB1 and TGFBR2, thereby contributing to gene transcription (By similarity). Promotes phosphorylation of the H2AZ1 chaperone VPS72/YL1 which enhances the interaction between HZAZ1 and VPS72 (By similarity). Regulates the entry of male germ cells into meiosis by controlling histone H2AZ1 deposition which facilitates the expression of meiotic genes such as MEIOSIN, leading to the initiation of meiosis (By similarity). Required for postnatal heart function through its role in maintenance of cardiac Ca(2+) homeostasis by modulating the expression of Ca(2+)-regulating proteins CASQ1 and ATP2A2/SERCA2A via deposition of histone H2AZ1 at their promoters (By similarity). During embryonic heart development, required for mitochondrial maturation and oxidative metabolism by functioning through H2AZ1 deposition to activate transcription of metabolic genes and is also required to maintain the stability of the respiratory complex (By similarity). In neural cells, increases deposition of the H2AZ1 histone variant and promotes neurite growth (PubMed:35175558). Plays a role in TP53/p53-mediated apoptosis induction by stimulating the transcriptional activation of several proapoptotic p53 target genes such as PMAIP1/NOXA and BBC3/PUMA (PubMed:17380123). Mediates cell cycle arrest induced in response to gamma-irradiation by enhancing recruitment of TP53/p53 to the promoter of the cell cycle inhibitor CDKN1A, leading to its transcriptional activation (PubMed:17700068). Recruited to the promoter of cyclin- dependent kinase CDK6 and inhibits its transcription, possibly by decreasing the acetylation level of histone H4, leading to cell cycle arrest at the G1 phase (By similarity). Plays a role in lens fiber cell differentiation by regulating the expression of cell cycle regulator CDKN1A/p21Cip1 (By similarity). Binds to transcriptional repressor NR1D2 and relieves it of its inhibitory effect on the transcription of apolipoprotein APOC3 without affecting its DNA-binding activity (PubMed:17892483).

**Cellular Location** Nucleus.

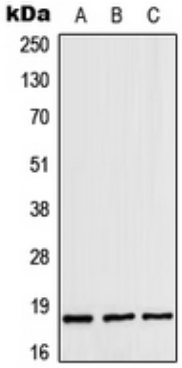
**Tissue Location** Expressed abundantly in liver, but weakly in skeletal muscle, ovary and small intestine

## References


Wang Y.,et al.Submitted (SEP-1998) to the EMBL/GenBank/DDBJ databases.
Xu F.,et al.Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases.
Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Hillier L.W.,et al.Nature 424:157-164(2003).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.


## Images

Western blot analysis of ZNHIT1 expression in MOLT4 (A), mouse heart (B), rat heart (C) whole cell lysates.
(Predicted band size: 17 kD; Observed band size: 18 kD)

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