Datasheet for ABIN7545838

# ZNHIT1 Protein (AA 1-154) (His tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | ZNHIT1 |
| Protein Characteristics: | AA 1-154 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This ZNHIT1 protein is labelled with His tag. |

## Product Details

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| Purpose: | Custom-made recombinant ZNHIT1 Protein expressed in mammalian cells. |
| Sequence: | MVEKKTSVRS QDPGQRRVLD RAARQRRINR QLEALENDNF QDDPHAGLPQ LGKRLPQFDD DADTGKKKKK TRGDHFKLRF RKNFQALLEE QNLSVAEGPN YLTACAGPPS RPQRPFCAVC GFPSPYTCVS CGARYCTVRC LGTHQETRCL KWTV **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.** |
| Specificity: | If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer. |
| Characteristics: | Key Benefits:<br>• Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalian cells and purified in one-step affinity chromatography<br>• The optimized expression system ensures reliability for intracellular, secreted and |

## Product Details

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| | transmembrane proteins.<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.<br><br>If you are not interested in a full length protein, please contact us for individual protein fragments.<br><br>The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified. |
| Purity: | > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC) |
| Grade: | custom-made |

## Target Details

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| Target: | ZNHIT1 |
| Alternative Name: | ZNHIT1 (ZNHIT1 Products) |
| Background: | Zinc finger HIT domain-containing protein 1 (Cyclin-G1-binding protein 1) (Zinc finger protein subfamily 4A member 1) (p18 Hamlet),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 |

## Target Details

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| | 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). {ECO:0000250\|UniProtKB:Q8R331, ECO:0000269\|PubMed:17380123, ECO:0000269\|PubMed:17700068, ECO:0000269\|PubMed:17892483, ECO:0000269\|PubMed:20473270, ECO:0000269\|PubMed:35175558}. |
| Molecular Weight: | 17.5 kDa |
| UniProt: | O43257 |

## Application Details

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| Application Notes: | We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Buffer: | The buffer composition is at the discretion of the manufacturer. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |

## Handling

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| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | 12 months |