Datasheet for ABIN7554277

# JMJD6 Protein (AA 1-403) (His tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | JMJD6 |
| Protein Characteristics: | AA 1-403 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This JMJD6 protein is labelled with His tag. |

## Product Details

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| Purpose: | Custom-made recombinant JMJD6 Protein expressed in mammalian cells. |
| Sequence: | MNHKSKKRIR EAKRSARPEL KDSLDWTRHN YYESFSLSPA AVADNVERAD ALQLSVEEFV ERYERPYKPV VLLNAQEGWS AQEKWTLERL KRKYRNQKFK CGEDNDGYSV KMKMKYYIEY MESTRDDSPL YIFDSSYGEH PKRRKLLEDY KVPKFFTDDL FQYAGEKRRP PYRWFVMGPP RSGTGIHIDP LGTSAWNALV QGHKRWCLFP TSTPRELIKV TRDEGGNQQD EAITWFNVIY PRTQLPTWPP EFKPLEILQK PGETVFVPGG WWHVVLNLDT TIAITQNFAS STNFPVVWHK TVRGRPKLSR KWYRILKQEH PELAVLADSV DLQESTGIAS DSSSDSSSSS SSSSSDSDSE CESGSEGDGT VHRRKKRRTC SMVGNGDTTS QDDCVSKERS SSR **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. |

## Product Details

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| 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 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: | JMJD6 |
| Alternative Name: | JMJD6 (JMJD6 Products) |
| Background: | Bifunctional arginine demethylase and lysyl-hydroxylase JMJD6 (EC 1.14.11.-) (Histone arginine demethylase JMJD6) (JmjC domain-containing protein 6) (Jumonji domain-containing protein 6) (Lysyl-hydroxylase JMJD6) (Peptide-lysine 5-dioxygenase JMJD6) (Phosphatidylserine receptor) (Protein PTDSR),FUNCTION: Dioxygenase that can both act as a arginine demethylase and a lysyl-hydroxylase (PubMed:24498420, PubMed:17947579, PubMed:20684070, PubMed:21060799, PubMed:22189873). Acts as a lysyl-hydroxylase that catalyzes 5-hydroxylation on specific lysine residues of target proteins such as U2AF2/U2AF65 and LUC7L2. Regulates RNA splicing by mediating 5-hydroxylation of U2AF2/U2AF65, affecting the pre-mRNA splicing activity of U2AF2/U2AF65 (PubMed:19574390). Hydroxylates its own N-terminus, which is required for homooligomerization (PubMed:22189873). Plays a role in the regulation of nucleolar liquid-liquid phase separation (LLPS) by post-translationally modifying LIAT1 at its lysine-rich domain which inhibits LIAT1 nucleolar targeting (By similarity). In addition to peptidyl-lysine 5-dioxygenase activity, may act as an RNA hydroxylase, as suggested |

## Target Details

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| | by its ability to bind single strand RNA (PubMed:20679243, PubMed:29176719). Also acts as an arginine demethylase which preferentially demethylates asymmetric dimethylation (PubMed:17947579, PubMed:24498420, PubMed:24360279). Demethylates histone H3 at 'Arg-2' (H3R2me) and histone H4 at 'Arg-3' (H4R3me), including mono-, symmetric di- and asymmetric dimethylated forms, thereby playing a role in histone code (PubMed:17947579, PubMed:24360279). However, histone arginine demethylation may not constitute the primary activity in vivo (PubMed:17947579, PubMed:21060799, PubMed:22189873). In collaboration with BRD4, interacts with the positive transcription elongation factor b (P-TEFb) complex in its active form to regulate polymerase II promoter-proximal pause release for transcriptional activation of a large cohort of genes. On distal enhancers, so called anti-pause enhancers, demethylates both histone H4R3me2 and the methyl cap of 7SKsnRNA leading to the dismissal of the 7SKsnRNA:HEXIM1 inhibitor complex. After removal of repressive marks, the complex BRD4:JMJD6 attract and retain the P-TEFb complex on chromatin, leading to its activation, promoter-proximal polymerase II pause release, and transcriptional activation (PubMed:24360279). Demethylates other arginine methylated-proteins such as ESR1 (PubMed:24498420). Has no histone lysine demethylase activity (PubMed:21060799). Required for differentiation of multiple organs during embryogenesis. Acts as a key regulator of hematopoietic differentiation: required for angiogenic sprouting by regulating the pre-mRNA splicing activity of U2AF2/U2AF65 (By similarity). Seems to be necessary for the regulation of macrophage cytokine responses (PubMed:15622002). {ECO:0000250\|UniProtKB:Q9ERI5, ECO:0000269\|PubMed:15622002, ECO:0000269\|PubMed:17947579, ECO:0000269\|PubMed:19574390, ECO:0000269\|PubMed:20679243, ECO:0000269\|PubMed:20684070, ECO:0000269\|PubMed:21060799, ECO:0000269\|PubMed:22189873, ECO:0000269\|PubMed:24360279, ECO:0000269\|PubMed:24498420, ECO:0000269\|PubMed:29176719}. |
| Molecular Weight: | 46.5 kDa |
| UniProt: | Q6NYC1 |

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