

JMJD2A/KDM4A recombinant protein

Recombinant JMJD2A/KDM4A protein

CATALOG #
AAA59694

HOST
Baculovirus

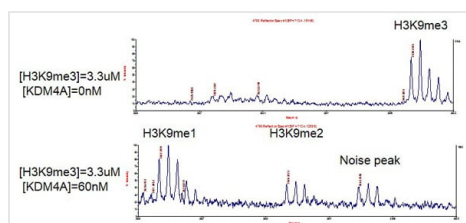
PRODUCT SYNONYMS

JMJD2A/KDM4A; Recombinant JMJD2A/KDM4A protein; Lysine Demethylase 4A; Jumonji C Domain-Containing Histone Demethylase 3A; JMJD2A/KDM4A recombinant protein

PRODUCT SPECIFICATIONS

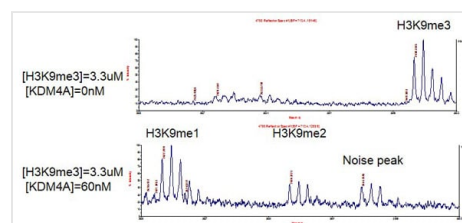
Host	Baculovirus
Purity/Purification	The recombinant protein is >85% pure by SDS-PAGE.
Form/Format	Full length recombinant JMJD2A/KDM4A protein was expressed in Sf9 cells and is supplied in 25mM Hepes pH7.5, 300mM NaCl, 10% Glycerol, 0.04% Triton X-100, 0.5mM TCEP.
Protein Species	Human
Tag	DYKDDDDK-Tag
Notes	This product was manufactured as described in Protein Details. Where possible, We has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



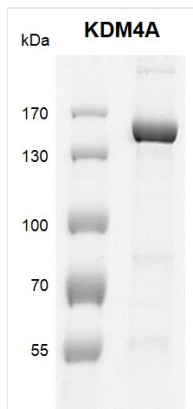
Application Data

HTRF assay for JMJD2A / KDM4A activity 1 uM H3K9me3 peptide was incubated with different concentrations of JMJD2A / KDM4A protein in a 10 ul reaction system containing 50 mM HEPES-NaOH pH 7.5, 1 mM TCEP, 50 uM 2-OG, 50 uM Ascorbate and 25 uM (NH4)2Fe(SO4)2·6H2O for 1 hr, then 10 ul H3K9me2 antibody and SA-XL665 mixture (each 1:100 dilution in HTRF Detection Buffer) was added to each reaction system and incubated for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.



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SDS-PAGE

Recombinant JMJD2A / KDM4A protein gel. JMJD2A / KDM4A protein was run on a 10% SDS-PAGE gel and stained with Coomassie blue. MW: 125.3 kDa Purity: > 85%

ADDITIONAL INFORMATION

Related Product Information for JMJD2A/KDM4A recombinant protein	Short Description: Recombinant JMJD2A/KDM4A (accession number NP_055478.2) was expressed in Sf9 cells and contains an N-terminal DYKDDDDK tag with an observed molecular weight of 125.3 kDa. KDM4A (lysine (K)-specific demethylase 4A), also known as JMJD2A (Jumonji Domain Containing 2A) is a nuclear protein that functions as a trimethylation-specific histone demethylase that preferentially demethylates trimethylated lysine 9 (K9me3) and lysine 36 (K36me3) residues of histone H3, converting these trimethylated histone residues to dimethylated form. KDM4A has no activity for mono- and dimethylated H3K9 and H3K36. KDM4A functions as a transcriptional repressor, participating in transcriptional repression of ASCL2 and E2F-responsive promoters via the recruitment of histone deacetylases and NCOR1, respectively. An additional KDM4A isoform, KDM4A Isoform 2, that lacks the N-terminal demethylase domain is crucial for muscle differentiation in promoting transcriptional activation of the MyoG gene by directing the removal of repressive chromatin marks at its promoter. Recombinant JMJD2A/KDM4A can be used for enzyme kinetics and inhibitor screening studies. Background: KDM4A (lysine (K)-specific demethylase 4A), also known as JMJD2A (Jumonji Domain Containing 2A) is a nuclear protein that functions as a histone demethylase that preferentially demethylates di- and trimethylated lysine 9 (K9me3) and lysine 36 (K36me3) residues of histone H3, converting these trimethylated histone residues to mono- or dimethylated form. JMJD2A/KDM4A has no activity for monomethylated H3K9 and H3K36. KDM4A functions as a transcriptional repressor, participating in transcriptional repression of ASCL2 and E2F-responsive promoters via the recruitment of histone deacetylases and NCOR1, respectively. An additional KDM4A isoform, KDM4A Isoform 2, that lacks the N-terminal demethylase domain is crucial for muscle differentiation in promoting transcriptional activation of the MyoG gene by directing the removal of repressive chromatin marks at its promoter.
Product Categories/Family for JMJD2A/KDM4A recombinant protein	Recombinant Proteins ; Histone Demethylase (HDM)

NCBI AND UNIPROT INFORMATION

NCBI GI #	98986459
NCBI GeneID	9682
NCBI Accession #	NP_055478.2
NCBI GenBank Nucleotide #	NM_014663.2
UniProt Accession #	O75164 ; Q5VVB1
Molecular Weight	54,697 Da
NCBI Official Full Name	lysine-specific demethylase 4A
NCBI Official Synonym Full Names	lysine (K)-specific demethylase 4A
NCBI Official Symbol	KDM4A
NCBI Official Synonym Symbols	JMJD2; JHDM3A; JMJD2A; TDRD14A

NCBI Protein Information	lysine-specific demethylase 4A; jumonji domain containing 2; tudor domain containing 14A; jumonji domain containing 2A; jumonji domain-containing protein 2A; jumonji C domain-containing histone demethylase 3A; jmjC domain-containing histone demethylation
UniProt Protein Name	Lysine-specific demethylase 4A
UniProt Gene Name	KDM4A
UniProt Synonym Gene Names	JHDM3A; JMJD2; JMJD2A; KIAA0677
UniProt Entry Name	KDM4A_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/kdm4a-recombinant-protein-baculovirus/59694>