Active Recombinant Human KDM4A, FLAG-tagged

Cat. No. KDM4A-50H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human KDM4A (accession number NP_055478.2) was expressed in Sf9 cells and contains an N-terminal FLAG tag with an observed molecular weight of 125.3 kDa.
Species	Human
Source	Sf9 Cells
Description	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.
Form	25 mM HEPES, pH 7.5, 150 mM NaCl and 5% glycerol.
Bio-activity	H3K9me3 and H3K36me3 demethylase.
Applications	Enzyme kinetics, inhibitor screening, and selectivity profiling.

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Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage.
Concentration	0.82 mg/ml

GENE INFORMATION

Gene Name	KDM4A lysine (K)-specific demethylase 4A [Homo sapiens]
Official Symbol	KDM4A
Synonyms	KDM4A; lysine (K)-specific demethylase 4A; JMJD2, JMJD2A, jumonji domain containing 2 , jumonji domain containing 2A; lysine-specific demethylase 4A; JHDM3A; jumonji C domain containing histone demethylase 3A; KIAA0677; jumonji domain containing 2; jumonji domain containing 2A; jumonji domain-containing protein 2A; jumonji C domain-containing histone demethylase 3A; jmjC domain-containing histone demethylation protein 3A; JMJD2; JMJD2A;
Gene ID	9682
mRNA Refseq	NM_014663
Protein Refseq	NP_055478
MIM	609764
UniProt ID	O75164
Chromosome Location	1p34.1

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Function	histone demethylase activity (H3-K36 specific); metal ion binding; oxidoreductase activity; oxidoreductase activity, acting on single donors with incorporation of molecular oxygen, incorporation of two atoms of oxygen; protein binding; zinc ion binding;

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