Recombinant JMJD2D / KDM4D protein

Catalog No: 31459, 31859
Expressed In: Baculovirus

Quantity: 20 µg
Concentration: 0.25 µg/µl
Source: Human

Buffer Contents: Full length recombinant JMJD2D / KDM4D protein is supplied at a concentration of 0.25 µg/µl in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 mM TCEP.

Background: KDM4D (lysine (K)-specific demethylase 4D), also known as **JMJD2D (Jumonji Domain Containing 2D)** is a protein that functions as a histone demethylase that preferentially demethylates di- and trimethylated lysine 9 residues of histone H3, while it has no activity on monomethylated H3K9 residues.

Protein Details: Recombinant JMJD2D / KDM4D (accession number NP_060509.2) was expressed in Sf9 cells and contains an N-terminal FLAG tag with an observed molecular weight of 63.2 kDa. The recombinant protein is >60% pure by SDS-PAGE.

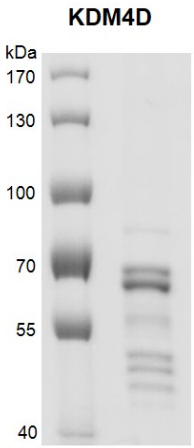
Application Notes: Recombinant JMJD2D / KDM4D is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

Specific Activity: H3K9me3 demethylase.

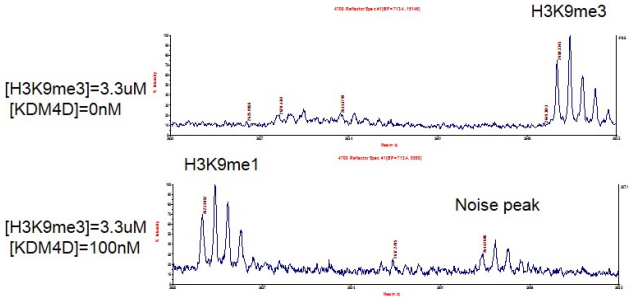
Histone Demethylase Assay Conditions:
50 mM HEPES pH 7.5, 0.02% Triton X-100, 100 µM 2OG, 100 µM Ascorbate, 50 µM (NH4)2Fe(SO4)2·6H2O, 1 mM TCEP, 100 nM Recombinant JMJD2D / KDM4D protein, and 3.3 µM H3K9me3 (aa 1-21) peptide at 2 hours at room temperature. MALDI-TOF was used for detection.

Storage and Guarantee: 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. This product is guaranteed for 6 months from date of receipt.

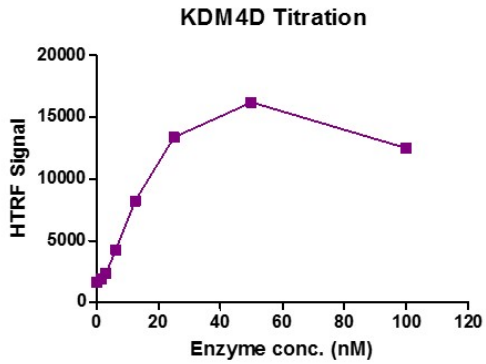
This product is for research use only and is not for use in diagnostic procedures.



Recombinant JMJD2D / KDM4D protein gel.
JMJD2D / KDM4D protein was run on an 8% SDS-PAGE gel and stained with Coomassie Blue.



MALDI-TOF Assay for JMJD2D / KDM4D activity .
3.3 µM H3K9me3 peptide was incubated with 100 nM JMJD2D / KDM4D in reaction buffer for 2 hours at room temperature. The reaction product was detected by MALDI-TOF. Single 3.3 µM H3K9me3 peptide was used as a negative control.Catalytic Ability: >66 turnovers / enzyme molecule.



HTRF Assay for Recombinant JMJD2D / KDM4D activity.
3.3 µM H3K9me3 peptide was incubated with JMJD2D / KDM4D protein in reaction buffer for 1 hour at room temperature.Anti-H3K9me2 antibody was used to detect reaction product.