

Recombinant JARID1B / KDM5B protein

Catalog No: 31432, 31832

Expressed In: Sf9 cells

Quantity: 20 µg

Concentration: 0.2 µg/µl

Source: Human

Buffer Contents: Full length recombinant JARID1B / KDM5B protein expressed in Sf9 at a concentration of 0.2 mg/ml in 25 mM HEPES pH 7.5, 300 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 mM TCEP and 3X FLAG peptide.

Background: **Lysine (K)-specific demethylase 5B (KDM5B)**, also known as **Jumonji, AT rich interactive domain 1B (JARID1B)**, is a histone demethylase that specifically demethylates lysine 4 of histone H3 (H3K4), thereby playing a central role in defining the histone code. KDM5B demethylates trimethylated, dimethylated and monomethylated H3K4. It does not demethylate histone H3K9 or H3K27. KDM5B functions as a transcriptional corepressor for FOXG1B and PAX9. KDM5B induces the proliferation of breast cancer cells by repressing tumor suppressor genes such as BRCA1 and HOXA5. In contrast, it may act as a tumor suppressor for melanoma.

Protein Details: Recombinant JARID1B / KDM5B (accession number NP_006609, full length) was expressed in Sf9 and contains an N-terminal FLAG tag with a molecular weight of 179.9 kDa. The recombinant protein is >75% pure by SDS-PAGE.

Application Notes: Recombinant JARID1B / KDM5B is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

Specific Activity: H3K4me3 demethylase.

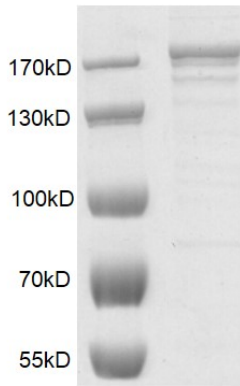
Catalytic Rate: 20 turnovers/ enzyme molecule

Histone Demethylase Assay Conditions: 3.3 µM H3K4me3 (aa 1-21) peptide was incubated with different concentrations of recombinant JARID1B / KDM5B protein in reaction buffer containing 50 mM HEPES pH 7.5, 0.02% Triton X100, 100 µM 2OG, 100 µM Ascorbate, 50 µM (NH₄)₂Fe(SO₄)₂·6H₂O, 1 mM TCEP for 1 hours at room temperature. HTRF and MALDI-TOF were 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.

JARID1B



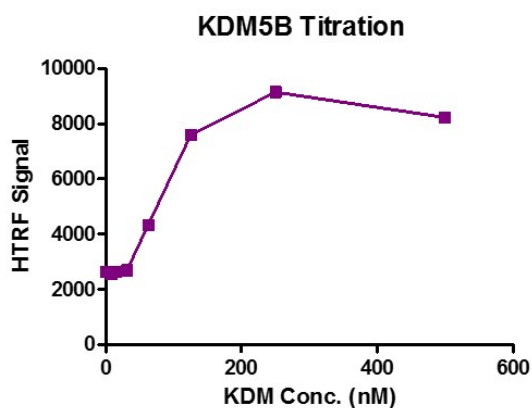
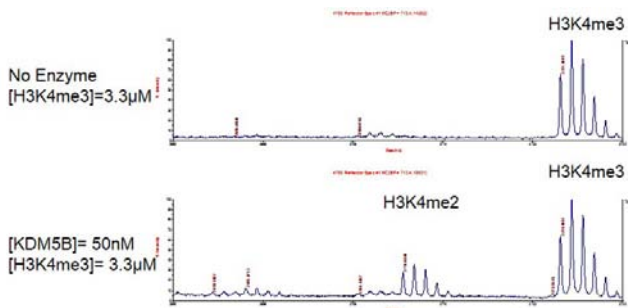
Recombinant JARID1B / KDM5B protein gel.

JARID1B / KDM5B protein was run on an 8% SDS-PAGE gel and stained with Coomassie blue.

Recombinant JARID1B / KDM5B protein activity assay.

3.3 μM H3K4me3 peptide was incubated with 50 nM JARID1B / KDM5B in reaction buffer for 2 hours at room temperature. The reaction product was detected by MALDI-TOF. Single 3.3 μM H3K4me3 peptide was used as negative control.

Catalytic Ability: 20 turnovers/ enzyme molecule



Recombinant JARID1B / KDM5B protein activity assay.

3.3 μM H3K4me3 peptide was incubated with JARID1B / KDM5B in reaction buffer for 1 hours at room temperature. JARID1B / KDM5B enzyme was used in a HTRF assay to determine enzyme linearity. Demethylated peptide (H3K4me2) was measured using H3K4me2-specific antibody.