

Recombinant UTX / KDM6A protein

Catalog No: 31460, 31860
Expressed In: Baculovirus

Quantity: 20 µg
Source: Human

Buffer Contents: Full length recombinant UTX / KDM6A protein expressed in Sf9 cells at a concentration of 0.6 mg/ml in 25 mM HEPES, pH 7.5, 150 mM NaCl and 5% glycerol.

Background: KDM6A (lysine (K)-specific demethylase 6A), also known as **UTX (Ubiquitously Transcribed Tetratricopeptide Repeat, X Chromosome)** is a protein that functions as a histone demethylase that preferentially demethylates di- and trimethylated lysine 27 residues of histone H3, while it has no activity on monomethylated H3K27 residues. KDM6A plays a central role in posterior development by regulating HOX gene expression. Demethylation of lysine 27 is concomitant with methylation of lysine 4 of histone H3 and regulates the recruitment of the PRC1 complex and monoubiquitination of histone H2A.

Protein Details: Recombinant UTX / KDM6A (accession number NP_066963.2) was expressed in Sf9 cells and contains an N-terminal FLAG tag with an observed molecular weight of 158.8 kDa. The recombinant protein is >72% pure by SDS-PAGE.

Application Notes: Recombinant UTX / KDM6A is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

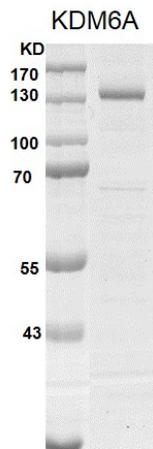
Specific Activity: H3K27me3 demethylase.

Histone Demethylase Assay Conditions:

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, 100 nM Recombinant UTX / KDM6A protein, and 3.3 µM H3K27me3 peptide at 2 hours at room temperature. MALDI-TOF was used for detection.

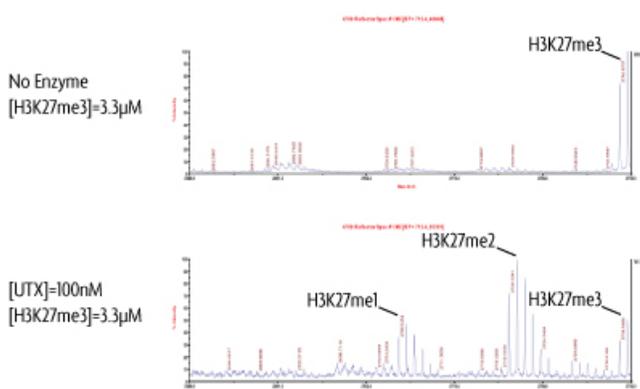
Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

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



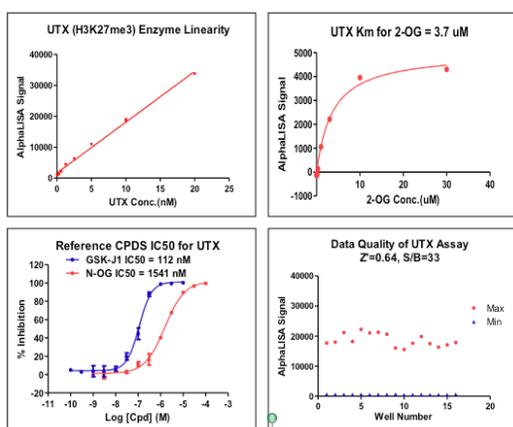
Recombinant UTX / KDM6A protein gel.

UTX / KDM6A protein was run on an SDS-PAGE gel and stained with Coomassie blue.



UTX / KDM6A activity assay.

Recombinant UTX / KDM6A activity measured using a demethylation assay. MALDI-TOF was used for detection.



UTX / KDM6A AlphaLISA assay.

UTX / KDM6A enzyme was used in an AlphaLISA assay to determine enzyme linearity, 2OG Km and IC₅₀ of two reference compounds. 10 nM-20 nM KDM6A was used to develop an HTS screening assay and well-to-well reproducibility was also assessed at Z'=0.64. Demethylated peptide (H3K27me2) was measured using methylation-specific antibody. This data was generated and kindly provided courtesy of ChemPartner.