

Product datasheet for MC228011

Kat5 (NM_001199248) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids

Product Name: Kat5 (NM_001199248) Mouse Untagged Clone

Tag: Tag Free Symbol: Kat5

Synonyms: Al839539; CPLA2; Htatip; Htatip1; PLIP; Tip55; Tip60

Vector:pCMV6-Entry (PS100001)E. coli Selection:Kanamycin (25 ug/mL)

Cell Selection: Neomycin

OriGene Technologies, Inc.

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Fully Sequenced ORF: >MC228011 representing NM_001199248

Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

GCCCCCAGTAGCCGACCCTGGCGCGCGCTGTCTCCCCAGGGGGAGATAATCGAGGGCTGCCGCCTGCC CGTGCTGCGCGCAACCAGGACAACGAAGATGAGTGGCCCCTGGCTGAGATCCTGAGCGTGAAGGACATC AGTGGCCGAAAGCTTTTCTATGTCCATTACATTGACTTCAACAAACGTCTGGATGAATGGGTGACTCACG TGGGTCCCGCCCCGGCTCTCCCGAAAGAGAGGTGAAACGGAAGGTGGAGGTGGTTTCACCAGCAACCCCA GTGCCCAGCGAGACAGCCCCAGCCTCGGTTTTCCCTCAGAATGGGTCAGCCCGTAGGGCAGTGGCAGCCC AGCCTGGACGGAAGCGGAAATCTAATTGCTTGGGCACTGATGAGGATTCTCAGGACAGCTCAGATGGAAT ACCGTCAGCACCACGAATGACTGGCAGTCTGGTGTCTGACCGGAGCCACGACGACATTGTCACCCGGATG AAGAACATTGAGTGTATTGAGCTTGGCCGGCACCGCCTCAAGCCGTGGTACTTCTCCCCGTACCCACAAG AGCTTACCACGCTACCCGTCCTCTACCTGTGCGAATTTTGCCTCAAATATGGCCGTAGCCTCAAGTGTCT GCAACGCCACTTGACCAAATGTGATCTTCGGCACCCTCCAGGCAATGAAATTTACCGCAAGGGCACCATC TCCTTTTTTGAGATTGATGGACGGAAAAACAAGAGTTACTCACAAAACCTGTGTCTTCTGGCCAAGTGTT TCCTGGACCACAAAACACTGTACTATGACACTGACCCCTTCCTCTTCTACGTAATGACGGAGTATGACTG CAAAGGTTTCCACATCGTGGGCTACTTCTCCAAGGAAAAGGAATCCACAGAAGATTACAATGTGGCCTGC ATCTTGACTCTGCCTCCCTACCAGCGCCGGGGCTATGGCAAGCTGCTTATTGAGTTCAGCTATGAACTCT CGAAAGTAGAAGGGAAGACCGGAACTCCTGAGAAACCCCTGTCAGATCTTGGCCTCCTATCCTACCGAAG TTACTGGTCCCAAACCATCTTGGAGATCCTGATGGGGCTGAAGTCGGAGAGCGGGGAGAGGCCACAGATC ACCTCATCAATTACTACAAGGGCCAGTATATCCTAACTCTGTCAGAAGACATCGTGGATGGGCATGAGCG GGCTATGCTCAAGCGGCTCCTTCGGATTGACTCCAAGTGTCTGCACTTCACTCCCAAAGACTGGAGCAAG AGAGGAAAGTGGTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATTACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul

ACCN: NM 001199248

Insert Size: 1485 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a

point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative

RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: Clone contains native stop codon, and expresses the complete ORF without any c-terminal

tag.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube

containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).





Reconstitution Method:

- 1. Centrifuge at 5,000xg for 5min.
- 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
- 3. Close the tube and incubate for 10 minutes at room temperature.
- 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
- 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: <u>NM 001199248.1</u>, <u>NP 001186177.1</u>

RefSeq Size: 1971 bp
RefSeq ORF: 1485 bp
Locus ID: 81601
UniProt ID: Q8CHK4
Cytogenetics: 19 A

Gene Summary:

Catalytic subunit of the NuA4 histone acetyltransferase complex which is involved in transcriptional activation of select genes principally by acetylation of nucleosomal histones H4 and H2A (By similarity). This modification may both alter nucleosome-DNA interactions and promote interaction of the modified histones with other proteins which positively regulate transcription (By similarity). This complex may be required for the activation of transcriptional programs associated with oncogene and proto-oncogene mediated growth induction, tumor suppressor mediated growth arrest and replicative senescence, apoptosis, and DNA repair (By similarity). NuA4 may also play a direct role in DNA repair when recruited to sites of DNA damage (By similarity). Component of a SWR1-like complex that specifically mediates the removal of histone H2A.Z/H2AFZ from the nucleosome (By similarity). Also acetylates non-histone proteins, such as ATM, NR1D2, RAN, FOXP3, ULK1 and RUBCNL/Pacer (PubMed:22539723). Directly acetylates and activates ATM. Relieves NR1D2-mediated inhibition of APOC3 expression by acetylating NR1D2 (By similarity). Promotes FOXP3 acetylation and positively regulates its transcriptional repressor activity. Acetylates RAN at 'Lys-134' (By similarity). Together with GSK3 (GSK3A or GSK3B), acts as a regulator of autophagy: phosphorylated at Ser-86 by GSK3 under starvation conditions, leading to activate acetyltransferase activity and promote acetylation of key autophagy regulators, such as ULK1 and RUBCNL/Pacer (PubMed:22539723).[UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (3) has multiple differences in the 5' coding region, compared

to variant 1. It encodes a shorter isoform (3, also known as gamma), compared to isoform 1.