

## Product datasheet for **MR230222**

### **Kat5 (NM\_001199248) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Kat5 (NM_001199248) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kat5
Synonyms:	A1839539; CPLA2; Htatiptip; Htatiptip1; PLIP; Tip55; Tip60
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>MR230222 representing NM\_001199248  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCGGAGGTGGTGGTCCGGTCCCGGGCGGGCGGAGCCAGGGGAGGTGGTAGAGCCCGAG  
 GCCCCAGTAGCCGACCTGGCGCCGCTGTCTCCAGGGGAGATAATCGAGGGCTGCCGCTGCC  
 CGTGCTGCGGCGCAACCAGGACAACGAAGATGAGTGGCCCTGGCTGAGATCCTGAGCGTGAAGGACATC  
 AGTGGCCGAAAGCTTTTCTATGTCCATTACATTGACTTCAACAAACGCTCTGGATGAATGGTGACTCACG  
 AGCGGCTGGACTTAAAGAAGATCCAATTTCCAAAGAAAGAGGCCAAGACACCTACCAAGAACGGACTTCC  
 TGGGTCCCGCCCGGCTCTCCGAAAGAGAGGTGAAACGGAAGGTGGAGGTGGTTTACCAGCAACCCCA  
 GTGCCAGCGAGACAGCCCGAGCTCGTTTTCCCTCAGAATGGGTCAGCCCGTAGGGCAGTGGCAGCCC  
 AGCCTGGACGGAAGCGGAAATCTAATTGCTTGGGCACTGATGAGGATTCTCAGGACAGCTCAGATGAAT  
 ACCGTGACACCAGCAATGACTGGCAGTCTGGTGTCTGACGGAGCCACGACGACATTGTCACCCGGATG  
 AAGAACATTGAGTGTATTGAGCTTGGCCGGCACCGCTCAAGCCGTGGTACTTCTCCCGTACCCACAAG  
 AGCTTACCACGCTACCCGTCCTCTACCTGTGCGAATTTGCTCAAAATATGGCCGTAGCCTCAAGTGTCT  
 GCAACGCCACTTGACCAATGTGATCTTCGGCACCCCTCCAGGCAATGAAATTTACCGCAAGGGCACCATC  
 TCCTTTTTGAGATTGATGGACGAAAAACAAGAGTTACTCACAAAACCTGTGTCTTCTGGCCAAGTGT  
 TCCTGGACCACAAAACACTGACTATGACACTGACCCCTTCTCTTCTACGTAATGACGGAGTATGACTG  
 CAAAGTTTCCACATCGTGGGCTACTTCTCAAGAAAAGGAATCCACAGAAGATTACAATGTGGCCTGC  
 ATCTTGACTTGCTCCCTACCAGCGCCGGGCTATGGCAAGCTGCTTATTGAGTTCAGCTATGAACTGC  
 CGAAAGTAGAAGGAAGACCGGAACTCCTGAGAAACCCCTGCAGATCTTGGCCTCCTATCCTACCGAAG  
 TTACTGGTCCCAAACCATCTTGGAGATCCTGATGGGGCTGAAGTCGGAGAGCGGGGAGAGGCCACAGATC  
 ACCATCAATGAGATCAGTGAATCACTAGTATCAAGAAAGAAAGATGTCATCTCCACTGCAATCTCA  
 ACCTCATCAATTACTACAAGGGCCAGTATATCCTAACTCTGTGAGAAGACATCGTGGATGGGCATGAGCG  
 GGCTATGCTCAAGCGGCTCCTTCGGATTGACTCCAAGTGTCTGCACCTCACTCCCAAAGACTGGAGCAAG  
 AGAGGAAAGTGG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR230222 representing NM\_001199248  
 Red=Cloning site Green=Tags(s)

MAEVSVPVPGAGRREPGEVGRARGPPVADPGAALSPQGEIEGCRPLVLRNQNEDWPLAEILSVKDI  
 SGRKLFYVHYIDFNKRLDEWVTHEERLDLKKIQFPKKEAKTPTKNGLPGSRPGSPEREVKKVEVVSATP  
 VPSETAPASVFPQNGSARRAVAAQPGRKRKSNCLGTDEDSQDSSDGIPSAAPRMTGSLVSDRSHDDIVTRM  
 KNIECIELGRHRLKPWFYSPYPQELTTLPLVYLCEFLKYGRSLKCLRHLTKCDLRHPPGNEIYRKGTI  
 SFFEIDGRKNKSYSQLCLLAKCFLDHKTLYYDTPFLFVYMTEDYCKGFHIVGYFSKEKESTEDYNVAC  
 ILTLPPYQRRGYGKLLIEFSYELSKVEGKTGTPEKPLSDLGLLSYRSYWSQTILEILMGLKSESGERPQI  
 TINEISEITSIKKEDVISTLQYLNINYYKQYILTLSEDIVDGHERRMLKRLLRIDSKCLHFTPKDWSK  
 RGKW

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

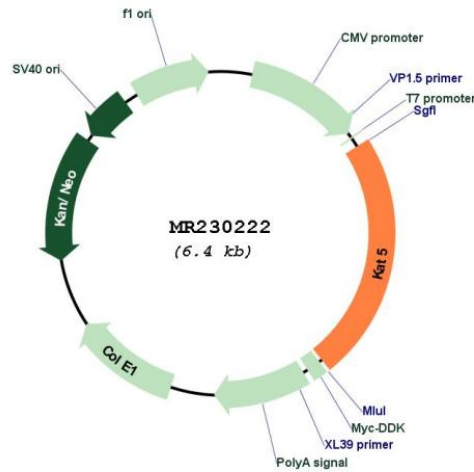
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_001199248

**ORF Size:** 1482 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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:** [NM\\_001199248.1](#), [NP\\_001186177.1](#)

**RefSeq Size:** 1971 bp

**RefSeq ORF:** 1485 bp

**Locus ID:** 81601

**UniProt ID:** [Q8CHK4](#)

**Cytogenetics:** 19 A

**MW:** 56.7 kDa

**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]