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Product datasheet for MR223799

Kmt2e (NM_026984) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kmt2e (NM_026984) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kmt2e
Synonyms:	1810033J14Rik; 9530077A04Rik; D230038D11Rik; Mll5; NKp44L
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR223799 representing NM_026984, codon optimized.
Due to the complexity of NM_026984, the ORF clone is codon optimized for mammalian Expression.
The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGCATAGCGATCCCATTGGGGGTTGATACAACAGAAACATCCTACTTGGAAATGGCTGCAGGCTCAG
AACCGGAATCCGTAGAAGCTAGCCCTGTGGTAGTTGAGAAATCCAACAGTTTTCCCCACCAGTTATACAC
CAGCAGCTCCCACCACTCACACAGCTACATCGGTCTGCCCTATGCGGACCATAATTATGGTGCTCGTCCT
CCTCCAACACCTCCAGCATCCCCTCCTCCATCAGGTCTCATTAGCAAAAACGAAGTAGGCATATTTACCA
CTCCTAATTTTGATGAAACTTCCAGTGCTACTACAATCAGCACATCTGAAGATGGAAGTTACGGTACTGA
TGTAACCAGGTGCATATGTGGTTTTACACATGATGACGGATACATGATCTGTTGTGACAAATGCAGTGTT
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TGATACCAGTGCAACTGAAAGTGGTGATGAAGTTCCTGTGGAATTATATACTGCATTTCAGCATACTCCA
ACTTCAATCACTTTAACTGCTTCCAGAGTTCCCAAGGTTACTGATAAAAGAAGGAAAAAAAGTGGGGAGA
AAGAACAAAACTTTTCAAAATGTAAAAAAGCCTTTCGTGAAGGATCTAGGAAATCATCAAGGGTTAAGGG
TTCAGCACCAGAAATTGATCCTTCATCTGATAGTTCAAATTTTGTTTGGGAAACAAAAATCAAAGCATGG
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CTTCAGACCTCCTGTAGAGAGCCATATACAGAAGAATAAAAAAATTCTGAAATCTGCCAAAGACTTGCCT
CCTGATGCACTTATCATTGAATATAGAGGGAAGTTTATGCTGAGAGAACAGTTTGAAGCAAATGGATATT

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AAGCGGGCCTAATCAAGCCCTGCCTGGCTCTACTTCACAGCAGTCCGTGCCTGGGCACCACGTCACACCT
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Protein Sequence:

>MR223799 representing NM_026984
Red=Cloning site Green=Tags(s)

MSIAIPLGVDTTETSYLEMAAGSEPESVEASPVVVEKSNSFPHQLYTSSSHHSHSYIGLPYADHNYGARP
PPTPPASPPPSGLISKNEVGIFTTPNFDETSSATTISTSEDGSYGTDVTRCICGFTHDDGYMICCDKCSV
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TSITLTASRVPKVTDKRRKKSGEKEQNFSKCKKAFREGSRKSSRVKGSAPEIDPSSDSSNFVWETKIKAW
MDRYEEANNNQYSEGVQREAQRLAQRLGSGNDSKDMNKSELSTNNSLFRPPVESHIQKNKKILKSAKDLP
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

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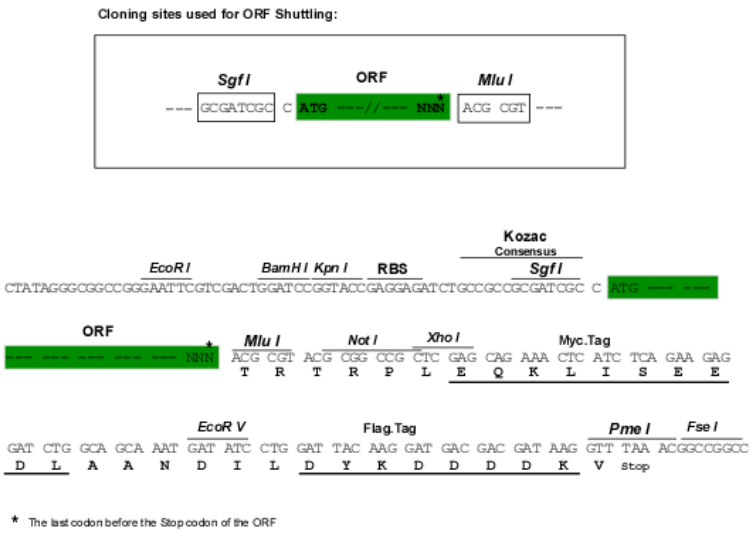
Cloning Scheme:



ACCN:	NM_026984
ORF Size:	5604 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_026984.1, NP_081260.1
RefSeq Size:	7229 bp
RefSeq ORF:	5607 bp
Locus ID:	69188

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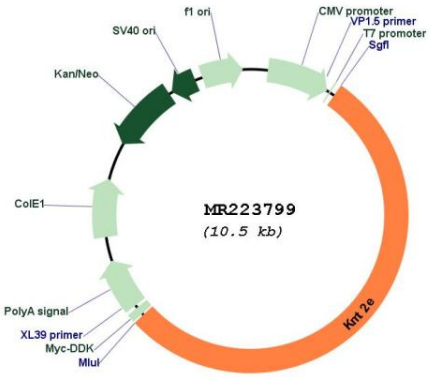
UniProt ID: Q3UG20

Cytogenetics: 5 A3

MW: 204.5 kDa

Gene Summary: Associates with chromatin regions downstream of transcriptional start sites of active genes and thus regulates gene transcription (By similarity). Chromatin interaction is mediated via the binding to tri-methylated histone H3 at 'Lys-4' (H3K4me3) (By similarity). Key regulator of hematopoiesis involved in terminal myeloid differentiation and in the regulation of hematopoietic stem cell (HSCs) self-renewal by a mechanism that involves DNA methylation (PubMed:18854576, PubMed:18952892, PubMed:18818388). Also acts as an important cell cycle regulator, participating in cell cycle regulatory network machinery at multiple cell cycle stages including G1/S transition, S phase progression and mitotic entry (PubMed:19264965). Recruited to E2F1 responsive promoters by HCFC1 where it stimulates tri-methylation of histone H3 at 'Lys-4' and transcriptional activation and thereby facilitates G1 to S phase transition (By similarity). During myoblast differentiation, required to suppress inappropriate expression of S-phase-promoting genes and maintain expression of determination genes in quiescent cells (PubMed:19264965).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR223799

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