

Product datasheet for **RC221269**

SMYD1 (NM_198274) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMYD1 (NM_198274) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMYD1
Synonyms:	BOP; KMT3D; ZMYND18; ZMYND22
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC221269 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACAATAGGGAGAATGGAGAAGCTGGAGGTCTTACCCTGAGGGCAAAGGAAGGGTCTGAAGGCCA
 CCAAGGAGTTCTGGGCTGCAGATATCATCTTGTGAGCGGGCTTATTCCGCAGTGGTTTTGACAGCCT
 TGTTAATTTGTGTGCCACACCTGCTTCAAGAGGCAGGAGAAGCTCCATCGCTGTGGCAGTGCAAGTTT
 GCCCATTACTGCGACCGCACCTGCCAGAAGGATGCTTGGCTGAACCACAAGAATGAATGTTGCGCCATCA
 AGAGATATGGGAAGGTGCCCAATGAGAACATCAGGCTGGCGCGCATCATGTGGAGGGTGGAGAGAGA
 AGGCACCGGGCTCACGGAGGGCTGCCTGGTGTCCGTGGACGACTTGCAGAACCACGTGGAGCACTTTGGG
 GAGGAGGAGCAGAAGGACCTGCGGGTGGACGTGGACACATTCTTGCAGTACTGGCCGCCGAGAGCCAGC
 AGTTCAGCATGCAGTACATCTCGCACATCTTCGGAGTGATTAACGCAACGGTTTTACTCTCAGTGATCA
 GAGAGGCCCTGCAGGCCGTGGGCGTAGGCATCTTCCCAACCTGGGCTGGTGAACCATGACTGTTGCCCC
 AACTGTACTGTATATTTAAACAATGGCAATCATGAGGCAGTGAAATCCATGTTTTCATACCCAGATGAGAA
 TTGAGCTCCGGGCCCTAGGCAAGATCTCAGAAGGAGAGGAGCTGACTGTGTCTATATTGACTTCTCAA
 CGTTAGTGAAGAACGCAAGAGGCAGCTGAAGAAGCAGTACTACTTTGACTGCACATGTGAACACTGCCAG
 AAAAACTGAAGGATGACCTCTTCTGGGGGTGAAAGACAACCCCAAGCCCTCTCAGGAAGTGGTGAAGG
 AGATGATAACAATTCTCCAAGGATACATTGGAAAAGATAGACAAGGCTCGTTCCGAGGGTTTGTATCATGA
 GGTTGTGAAATTATGCCGGGAGTGCCTGGAGAAGCAGGAGCCAGTGTGTTGCTGACACCAACATCTACATG
 CTGCGGATGCTGAGCATTGTTTCGGAGGTCCTTCTACCTCCAGGCCTTTGAGGAGGCCCTGTTCTATG
 CCAGGAGGATGGTGGACGGCTATATGAAGCTTACCACCCCAACAATGCCCAACTGGCCTGGCCGTGAT
 GCGGGCAGGGCTGACCAACTGGCATGCTGGTAACATTGAGGTGGGGCACGGGATGATCTGCAAAGCCTAT
 GCCATTCTCTGGTGGACACAGGACCTCCACCCCATCACTAAGGACTTAGAGGCCATGCGGGTGCAGA
 CGGAGATGGAGCTACGCATGTTCCGCCAGAACGAATTCATGTAACAAGATGCGCGAGGCTGCCCTGAA
 CAACCAGCCATGCAGGTCATGGCCGAGCCAGCAATGAGCCATCCCAGCTCTGTTCCACAAGAAGCAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC221269 protein sequence
 Red=Cloning site Green=Tags(s)

MTIGRMENVEVFTAEGKGRGLKATKEFWAADIIFAERAYSAVVFDLSLVNFVCHTCFKRQEKLRHRCGQCKF
 AHYCDRTCQKDAWLNHKNECSAIKRYGKVPNENIRLAARIMWRVEREGTGLTEGCLVSVDDLQNHVEHFG
 EEEQKDLRVDVDTFLQYWPQSQQFSMQYISHIFGVINCNGFTLSDQRGLQAVGVGIFPNLGLVNHDCWP
 NCTVIFNNGNHEAVKSMFHTQMRIELRALGKISEGEELTVSYIDFLNVSEERKRQLKKQYFFDCTCEHCQ
 KKLKDDLFLGVKDNPKPSQEVVKEMIQFSKDTLEKIDKARSEGLYHEVVKLCRECLEKQEPVADTNIYM
 LRMLSIYSEVLSYLQAFEEASFYARRMVDGYMKLYHPNNAQLGMAVMRAGLTNWHAGNIEVGHGMICKAY
 AILLVTHGPSHPITKDLAMRVQTEMLRMFRQNEFMYKMRREALNNQPMQVMAEPSNEPSPALFHKQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6604_d08.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

ACCN: NM_198274

ORF Size: 1470 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_198274.4](#)
RefSeq Size: 4441 bp

RefSeq ORF: 1473 bp

Locus ID: 150572

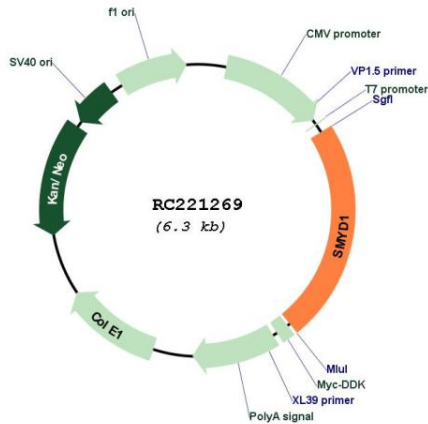
UniProt ID: [Q8NB12](#)
Cytogenetics: 2p11.2

Protein Families: Druggable Genome

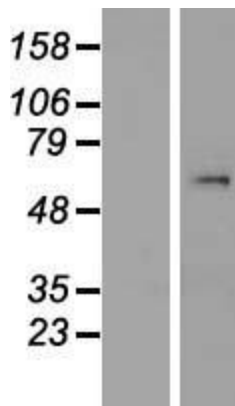
MW: 56.6 kDa

Gene Summary: Methylates histone H3 at 'Lys-4' (H3K4me), seems able to perform both mono-, di-, and trimethylation. Acts as a transcriptional repressor. Essential for cardiomyocyte differentiation and cardiac morphogenesis.[UniProtKB/Swiss-Prot Function]

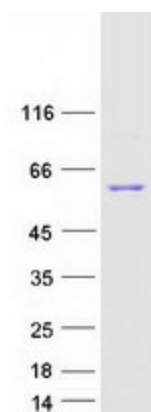
Product images:



Circular map for RC221269



Western blot validation of overexpression lysate (Cat# [LY405000]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221269 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SMYD1 protein (Cat# [TP321269]). The protein was produced from HEK293T cells transfected with SMYD1 cDNA clone (Cat# RC221269) using MegaTran 2.0 (Cat# [TT210002]).