

Product datasheet for **MR210572**

Dgcr8 (NM_033324) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dgcr8 (NM_033324) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Dgcr8
Synonyms:	D16H22S788E; D16H22S1742E; D16Wis2; Gy1; mir-1306; N41; Vo59c07
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR210572 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGACATATGAGAGTCCCTCTCCTCTCCCGCTGAGCCCGCAGGAGAAGCGATGATGGAGAACCGAG
 CTTGCCCTTCCAAGTGCTGCCCATGAACAGTCTCCACCACCTCCCCTGCAAACGTCCAGTGATGCAGA
 GGTAATGGACGTTGGCTCTGGTGGTGATGGACAGTCCGAACCTCCTGCCGACGACCCATTCAACTCTAC
 GGAGCTTCTCTTCTCCTCAAAGGATCCTTCTCTAAGGGCCGCTCCTCATAGACCCGAACTGTAGTGGCC
 ACAGCCCGCGCACTGCCCGGCACGCACCTGCGGTCCGGAAGTTCTCCCCTGACCTTAAGTTGCTTAAGGA
 TGTAAGATTAGCGTGAGCTTTACTGAGAGCTGCAGGAGTAAGGACAGGAAGGTGCTGTACACAGGAGTA
 GAACGCAGCACTCGCCTGAGTGTGGCCAGCTCCTTAGTCCTGTCAGTGGGACGTGCATGCTTGTCCCT
 TTGGCGGGAGTGTGGTAATGGGTAGGCCATAGGGGTGAGAGTGCAGATAAGAAGGATGAGGAAAATGA
 GCTGGATCAGGAAAAGAGAGTGGAGTATGCAGTCTCGATGAGTTAGAAGATTTTACTGACAATTTGGAG
 CTAGATGAAGAAGGAACAGGCGGGTTCACGGCTAAAGCAATCGTTCAAAGAGACAGAGTGGATGAAGAGG
 CCTTGAATTTCTCCTATGAGGATGACTTTGACAATGATGTGGACGCTTTACTAGAAGAAGGTCTCTGTGC
 TCCAAGAAGAGGCGAATGGAGGAAAAATATGGCGGAGACAGTGCATCCATCTGATGGAGAGACAAGT
 GTACAGCCAATGATGACCAAGATTAACAACAGTGCCTAAAAGTCTGGCCGTCCACCTACAGAGCCATTGC
 CTGATGGATGGATCATGACTTTTATAATTCTGGAGTCCCTGTATACCTGCACAGAGAGTCTCGAGTGGT
 CACTTGGTCCAGACCCTACTTCTTGGGAACAGGAAGCATACGGAACATGATCCTCCTCTAAGCAGTATC
 CCCTGCCTACATTATAAGAAAAAAGGACAATGAGGAACGAGAACAACAACTGTGATCTTGCCCCAGTG
 GAGAGGTGCACCTGTCAAGCCCTTGGGTGGTCTGCAGAGTTGGATTTCCCTCTGGAAGAGCCTGACTC
 CATGGGTGGAGACTCAGGGTCCATGGATGAGAAGGACCCATTGGGGGCTGAGGCAGCCGCTGGAGCCCTG
 GGACAAGTGAAGGCTAAAGTTGAGGTGTCAAAGATGAATCAGTTGATCTGGAGGAATTTCTGAATTTACC
 TTGAGAAGCGTTTTGACTTTGAACAAGTAACTGTAAAAAATTCAGGACTTGGGCTGAGCGGCGTCAAGT
 CAACCGTGAGATGAAGCGGAAGCAGGCCGAGTCAAGAGGCCCATCCTGCCAGCCAACAGAAAGCTGATC
 ACTCTATCTGTACAAGATGCACCCACAAAGAAAGAGTTTGTATCAATCCAATGGGAAGTCTGAGGTTT
 GCATCCTGCACGAATACATGCAGCGTGCCTCAAGGTCCGCCCTGTTTATAATTTCTTTGAATGTGAGAA
 TCCAAGTGAAGCCTTTTGGTGCCTCCGTGACCATTGATGGTGTGACTTACGGATCTGGAAGTCAAGCAGC
 AAAAACTTGCGAAGAATAAAGCTGCCGAGCCACCCTGGAAATTCATCCCTGACTTTGTTAAACAGA
 CCTCTGAGGAGAAGCCTAAAGACAGTGAAGAACTGGAGTATTTAACCACATCAGTATTGAGGATTCAGG
 AGTCTATGAGCTGACAAGCAAGGCTGGGCTGTTGTCTCCATATCAGATCCTCCATGAGTGCCTTAAAGA
 AACCATGGAATGGGTGACACATCCATCAAGTTTGAAGTGGTTCCTGGGAAAAACCAGAAGAGTGAATATG
 TTATGGCATGCGGCAACACACAGTGCAGCGGTGGTGAAGAATAAACGAGTTGGGAAACAATTAGCATC
 TCAGAAAAATCCTTCAAGTACTGCACCCACATGTCAAGAACTGGGTTCCCTACTACGCATGTATGGTCTG
 GAGAGCAGCAAAATGGTCAAGCAGGAGACCTCTGACAAGAGTGTGATAGAGCTACAGCAGTATGCCAAGA
 AGAACAGGCCCAACCTTACATCCTGAGCAAGCTACAAGAAGAGATGAAGAGGCTGGCTGCAGAGCGGGA
 GGAGACTCGGAAGAAACCAAGATGTCAATTGTAGCATCTGCCAGCCTGGTGGTGGAGCCCTTGTGCACA
 GTCGATGTA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR210572 protein sequence

Red=Cloning site Green=Tags(s)

METYESPSPLPREPAGEAMMENRACPFQVLPHEQSPPPPLQTSSDAEVMVGVGGDGGQSEPPADDPFNFY
GASLLSKGSFSKGRLLIDPNCSGHSPRTARHAPAVRKFSPLKLLKDVKISVSFTESCRSKDRKVLVTGV
ERSTRPECGQLLSPVSGDVHACPFGGVGNVGLGGESADKKDEENELDQEKRVYAVLDELEDFTDNLE
LDEEGTGGFTAKAIVQRDRVDEEALNFSYEDDFDNDVDALLEEGLCAPKKRRMEEKYGGSDHPSDGETS
VQPMMTKIKTVLKSRRPPTTEPLPDGWIMTFHNSGVPVYLHRESRVVTSRPFYFLGTGSIRKHDPLSSI
PCLHYKKMKDNEEREQNCDLAPSGEVSPVKPLGRSAELDFLEEPDSMGDSDGSMDEKDPLGAEAAAGAL
GQVKAKVEVCKDESVDLEEFNRYLEKRFDFEQVTYKFRWAERRQFNREMKRQAESERPILPANQKLI
TLQVQDAPTKKEFVINPNGKSEVCILHEYMQRVLKVRPVYNNFECENPSEPFASVTIDGVTYGGTASS
KKLAKNKAARATLEILIPDFVKQTSEEKPKDSELEYFNHISIEDSRVYELTSKAGLLSPYQILHECLKR
NHGMGDTSIKFEVVPKGNQKSEYVMACGKHTVRGWCKNKRVGKQLASQKILQLLHPVKNWGSLLRMYGR
ESSKMKVQETSDKSVIELQQYAKKNRPNLHILSKLQEMKRLAAEREETRKKPKMSIVASAQPGGEPLCT
VDV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_033324

ORF Size: 2322 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_033324.2](#), [NP_201581.2](#)

RefSeq Size: 4226 bp

RefSeq ORF: 2322 bp

Locus ID: 94223

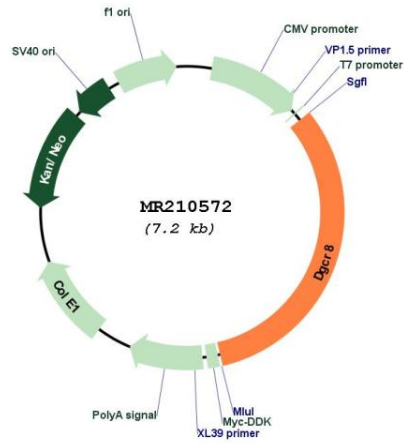
UniProt ID: [Q9EQM6](#)

Cytogenetics: 16 11.31 cM

MW: 86.3 kDa

Gene Summary: Component of the microprocessor complex that acts as a RNA- and heme-binding protein that is involved in the initial step of microRNA (miRNA) biogenesis (PubMed:17259983). Component of the microprocessor complex that is required to process primary miRNA transcripts (pri-miRNAs) to release precursor miRNA (pre-miRNA) in the nucleus. Within the microprocessor complex, DGCR8 function as a molecular anchor necessary for the recognition of pri-miRNA at dsRNA-ssRNA junction and directs DROSHA to cleave 11 bp away from the junction to release hairpin-shaped pre-miRNAs that are subsequently cut by the cytoplasmic DICER to generate mature miRNAs. The heme-bound DGCR8 dimer binds pri-miRNAs as a cooperative trimer (of dimers) and is active in triggering pri-miRNA cleavage, whereas the heme-free DGCR8 monomer binds pri-miRNAs as a dimer and is much less active. Both double-stranded and single-stranded regions of a pri-miRNA are required for its binding. Specifically recognizes and binds N6-methyladenosine (m6A)-containing pri-miRNAs, a modification required for pri-miRNAs processing (By similarity). Involved in the silencing of embryonic stem cell self-renewal (PubMed:17259983).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR210572