

Product datasheet for **RC215014**

Doublecortin (DCX) (NM_000555) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Doublecortin (DCX) (NM_000555) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Doublecortin
Synonyms:	DBCN; DC; LISX; SCLH; XLIS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC215014 representing NM_000555
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAAAACTCCCCTTCATAGTCATTGTACTGAAATGCAAAGACTGCTTCCTAAGCTGGAGATGCTAA
 CCTTGGGTAGCTCCTTCTGTTCTTCAAGGGGAATTTGTGAGGCTATGGATCATTACAACTGTTAG
 TCATGTGGGCATGTGTGAGGAAACAGATGCCAGTTTTAATGTATTTAGCCGAAGTTCCAATTTGATAGG
 AGCCACTGTCAGTCTCTGAGGTTCCACAAAATATGGAACCTGATTTTGGACTTTGACGAAAGAGATA
 AGACATCCAGGAACATGCGAGGCTCCCGGATGAATGGGTTGCCTAGCCCCACTCACAGCGCCACTGTAG
 CTTCTACCGAACAGAACCTTGCAGGCACTGAGTAATGAGAAGAAAGCCAAGAAGGTACGTTTCTACCGC
 AATGGGGACCGCTACTTCAAGGGGATTGTGTACGCTGTCTCTGACCGTTTTTCGACGCTTTGACGCT
 TGCTGGCTGACCTGACCGCATCTCTGTCTGACAACATCAACCTGCCTCAGGGAGTGCCTTACATTTACAC
 CATTGATGGATCCAGGAAGATCGGAAGCATGGATGAAGTGGAGGAAGGGAAAGCTATGTCTGTTCTCA
 GACAACTCTTTAAAAAGGTGGAGTACACCAAGAATGTCAATCCCAACTGGTCTGTCAACGTAACAAACAT
 CTGCCAATATGAAAGCCCCCAGTCCTTGGCTAGCAGCAACAGTGCACAGGCCAGGGAGAACAAGGACTT
 TGTGCGCCCCAAGCTGGTTACCATCATCCGAGTGGGGTGAAGCCTCGGAAGGCTGTGCGTGTGCTCTG
 AACAGAAGACAGCCACTCTTTTGGAGCAAGTCTCACTGATATCACAGAAGCCATCAAAGTGGAGACCG
 GGGTTGTCAAAAACTCTACACTCTGGATGAAACAGGTAAGTGTCTCCATGATTTCTTTGGTGTATGA
 TGATGTGTTTATTGCCTGTGGTCTGAAAAATTCGCTATGCTCAGGATGATTTTCTCTGGATGAAAT
 GAATGCCGAGTCATGAAGGAAACCCATCAGCCACAGCTGGCCAAAGGCATCCCAACACCTCAGAAGA
 CTTCCAGCAAGAGCCCTGGTCTATGCGCCGAAGCAAGTCTCCAGCTGACTCAGCAAACGGAACCTCCAG
 CAGCCAGCTCTTACCCCAAGTCTAAGCAGTCTCCATCTCTACGCCACCAGTCTGGCAGCCTCCGG
 AAGCACAAGTAGACCTGTACCTGCCTCTGTCTTGGATGACTCGGACTCGCTTGGTATTCCATG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC215014 representing NM_000555
 Red=Cloning site Green=Tags(s)

MKTLPLSHCTEMQRLLPKLEMLTLGSSFCSLQGEFCQAMDSFTTVSHVGMCEETDASFNVFSPKFQFDR
 SHCQSLRFHQNMELDFGHFDERDKTSRNMGRSRMNGLPSPTHSAHCSFYRTRTLQALSNEKKAKKRVFYR
 NGDRYFKGIVYAVSSDRFRSFDALLADLTRSLSDNINLPQGVRYIYIDGSRKIGSMDELEEGESYVCS
 DNFFFKVEYTKVNPNSVNVKTSANMKAPQSLASSNSAQARENKDFVRPKLVIIIRSGVKPRKAVRLL
 NKKTAHSFEQVLTDI TEAIKLETGVVKKLYTLDGKQVTLHDFFGDDDFIACGPEKFRYAQDDFSLDEN
 ECRVMKGNPSATAGPKASPTPQKTSKSPGPMRRSKSPADSANGTSSSQLSTPKSKQSPISTPTSPGSLR
 KHKVDLYLPLSLDSDSLGDSM

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mg3279_a01.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_000555

ORF Size: 1326 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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:

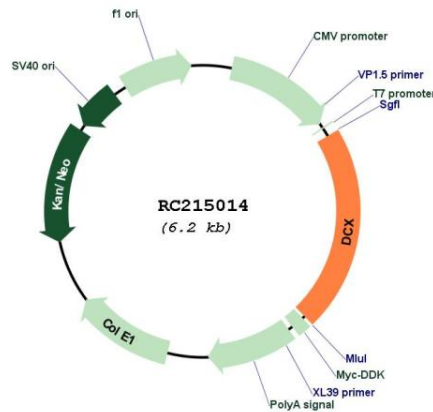
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store 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_000555.3](#), [NP_000546.2](#)

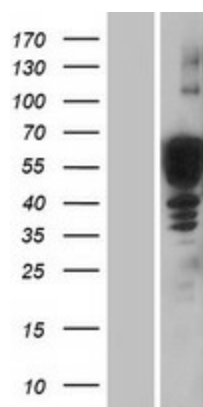
RefSeq Size:	9406 bp
RefSeq ORF:	1326 bp
Locus ID:	1641
UniProt ID:	<u>O43602</u>
Cytogenetics:	Xq23
Domains:	DCX
Protein Families:	Druggable Genome
MW:	49.1 kDa

Gene Summary: This gene encodes a member of the doublecortin family. The protein encoded by this gene is a cytoplasmic protein and contains two doublecortin domains, which bind microtubules. In the developing cortex, cortical neurons must migrate over long distances to reach the site of their final differentiation. The encoded protein appears to direct neuronal migration by regulating the organization and stability of microtubules. In addition, the encoded protein interacts with LIS1, the regulatory gamma subunit of platelet activating factor acetylhydrolase, and this interaction is important to proper microtubule function in the developing cortex. Mutations in this gene cause abnormal migration of neurons during development and disrupt the layering of the cortex, leading to epilepsy, cognitive disability, subcortical band heterotopia ("double cortex" syndrome) in females and lissencephaly ("smooth brain" syndrome) in males. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2010]

Product images:



Circular map for RC215014



Western blot validation of overexpression lysate (Cat# [LY424646]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215014 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).