

Product datasheet for **RG221891**

Doublecortin (DCX) (NM_178152) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Doublecortin (DCX) (NM_178152) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Doublecortin
Synonyms:	DBCN; DC; LISX; SCLH; XLIS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG221891 representing NM_178152 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAACCTGATTTTGGACACTTTGACGAAAGAGATAAGACATCCAGGAACATGCGAGGCTCCCGGATGA
ATGGTTGCTAGCCCCACTCACAGCGCCACTGTAGTTCTACCGAACCCAGAACCTTGCAGGCACTGAG
TAATGAGAAGAAAGCCAAGAAGGTACGTTTCTACCGCAATGGGGACCGCTACTTCAAGGGGATTGTGTAC
GCTGTGCTCTGACCGTTTTCGCAGCTTTGACGCCTTGTGGCTGACCTGACCGGATCTCTGTCTGACA
ACATCAACCTGCCTCAGGGAGTGCCTTACATTTACACCATGATGGATCCAGGAAGATCGGAAGCATGGA
TGAAGTGGAGGAAGGGAAAGCTATGTCTGTTCTCAGACAACCTCTTTAAAAAGGTGGAGTACACCAAG
AATGTCAATCCCAACTGGTCTGTCAACGTAACATCTGCCAATATGAAAGCCCCCAGTCCCTTGCTA
GCAGCAACAGTGCACAGGCCAGGGAGAACAAGGACTTTGTGCGCCCCAAGCTGGTTACCATCATCCGCGAG
TGGGGTGAAGCCTCGGAAGGCTGTGCGTGTGCTTCTGAACAAGAAGACAGCCCACTCTTTTGGCAAGTC
CTCACTGATATCAGAAAGCCATCAAACTGGAGACCGGGTGTCAAAAACTCTACACTCTGGATGGAA
AACAGGTAACCTTGTCTCCATGATTTCTTTGGTGTGATGATGTGTTTATTGCCTGTGGTCTGAAAAATT
TCGCTATGCTCAGGATGATTTTTCTCTGGATGAAAATGAATGCCGAGTCATGAAGGGAAACCCATCAGCC
ACAGCTGGCCAAAGGCATCCCCAACACCTCAGAAGACTTCAGCCAAGAGCCCTGGTCTCTATGCGCCGAA
GCAAGTCTCCAGCTGACTCAGGTAACGACCAAGACGCAAAACGGAACCTCCAGCAGCCAGCTCTACCCCC
CAAGTCTAAGCAGTCTCCATCTCTACGCCACCAGTCTGCGAGCCTCCGGAAGCACAAGGACCTGTAC
CTGCCTCTGCTTGGATGACTCGGACTCGCTTGGTGATTCCATG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG221891 representing NM_178152
 Red=Cloning site Green=Tags(s)

MELDFGHFDERDKTSRNMRGSRMNGLPSPTHSAHCSFYRTRTLQALSNEKKAKKRVFYRNGDRYFKGIVY
 AVSSDRFRSFDALLADLTRSLSDNINLPQGVRYIYIDGSRKIGSMDELEEGESYVCSSDNFFKKVEYTK
 NVNPNWSVNVKTSANMKAPQSLASSNSAQARENKDFVRPKLVTIIRSGVKPRKAVRVLLNKKTAHSFEQV
 LTDITEAIKLETGVVKKLYTLDGKQVTLHDFFGDDDDVF IACGPEKFRYAQDDFSLDENECRVMKGNPSA
 TAGPKASPTPQKTSAKSPGPMRRSKSPADSGNDQDANGTSSSQLSTPKSKQSPISPTPTSPGSLRKHKDL
 LPLSLDSDSLGDSM

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_178152

ORF Size: 1095 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_178152.3](#)

RefSeq Size: 9069 bp

RefSeq ORF: 1098 bp

Locus ID: 1641

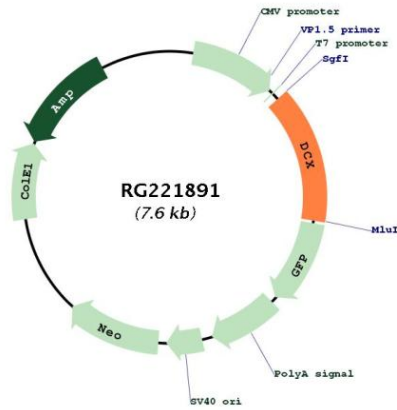
UniProt ID: [O43602](#)

Cytogenetics: Xq23

Protein Families: Druggable Genome

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 RG221891