

Product datasheet for **RC215138**

DYRK1A (NM_101395) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DYRK1A (NM_101395) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DYRK1A
Synonyms:	DYRK; DYRK1; HP86; MNB; MNBH; MRD7
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



[View online »](#)

ORF Nucleotide Sequence:

>RC215138 representing NM_101395
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCATACAGGAGAGAGACTTCAGCATGCAAACCTTCATCTGTTTCGGCTTGCACCGTCATTTTCATTCC
 ATGCTGCTGGCCTTCAGATGGCTGGACAGATGCCCATTCACATCAGTACAGTGACCGTCCGACGCCAAA
 CATAAGTGACCAACAGGTTTCTGCCTTATCATATTCTGACCAGATTACAGCAACCTCTAACTAACCAGGTG
 ATGCCTGATATTGTCATGTTACAGAGGCGGATGCCCAAACCTCCGTGACCCAGCAACTGCTCCCTGA
 GAAAACTTTCTGTTGACTTGATCAAACATACAAGCATATTAATGAGGTTTACTATGCAAAAAAGAAGCG
 AAGACACCAACAGGGCCAGGGAGACGATTCTAGTCATAAGAAGGAACGGAAGTTTACAATGATGGTTAT
 GATGATGATAACTATGATTATATTGTA AAAAACGGAGAAAAGTGGATGGATCGTTACGAAATTGACTCCT
 TGATAGGCAAAGTTCCCTTTGGACAGTTGTAAGGCATATGATCGTGTGGAGCAAGAATGGGTTGCCAT
 TAAAAATAAAGAACAAGAAGGCTTTTCTGAATCAAGCACAGATAGAAGTGCAGCTTCTTGAGCTCATG
 AACAAACATGACTGAAATGAAATACTACATAGTGCATTTGAAACGCCACTTTATGTTTCGAAACCATC
 TCTGTTTAGTTTTGAAATGCTGTCCTACAACCTCTATGACTTGTGAGAAACACCAATTTCCGAGGGGT
 CTCTTTGAACCTAACACGAAAGTTTGCACAACAGATGTGCACTGCACTGCTTTTCTTTCGCGACTCCAGAA
 CTTAGTATCATTCACTGTGATCTAAAACCTGAAAAATACCTTCTTTGTAACCCCAAACGCAGTGCAATCA
 AGATAGTTGACTTTGGCAGTTCTTGTGAGTTGGGCAGAGGATATACCAGTATATTCAGAGTCGCTTTTA
 TCGGTCTCCAGAGGTGCTACTGGGAATGCCTTATGACCTTGCCATTGATATGTGGTCCCTCGGGTGTATT
 TTGGTTGAAATGCACACTGGAGAACCTCTGTTTCAGTGGTCCCAATGAGGTAGATCAGATGAATAAAATAG
 TGGAACTTCTGGGTATTCACCTGCTCATATTTCTGACCAAGCAAAAAGCAAGAAAGTTCTTTGAGAA
 GTTGCCAGATGGCACTTGGAACTTAAAGAAGACCAAAGATGGA AAAACGGGAGTACAAAACCCAGGAACC
 CGTAAACTTCATAACATTCTGGAGTGGAAACAGGAGGACCTGGTGGGCGACGTGCTGGGGAGTCAGGTC
 ATACGGTCGCTGACTACTGAAAGTTCAAAGACCTCATTTTAAGGATGCTTGATTATGACCCAAAACCTCG
 AATTCAACCTTATTATGCTCTGCAGCACAGTTTCTTCAAGAAAACAGCTGATGAAGGTACAAATACAAGT
 AATAGTGTATCTACAAGCCCGCCATGGAGCAGTCTCAGTCTTCGGGCACCACCTCCAGTACATCGTCAA
 GCTCAGGTGGCTCATCGGGACAAGCAACAGTGGGAGAGCCCGGTGGATCCGACGCACCAGCATCGGCA
 CAGTGGTGGGCACTTACAGCTGCCGTGCAGGCCATGGACTGCGAGACACACAGTCCCAGGTGAGCTCG
 CACGTGGTTCATTTGCTGTGTACCTGCCATTCTCAGGTGGAGCAGCACTGGATGCCAGGTGCCTTAG
 AA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC215138 representing NM_101395
 Red=Cloning site Green=Tags(s)

MHTGGETSACKPSSVRLAPSFSHAAGLQ MAGQMPHSHQYSDRRQPNI SDQQVSALSYSDQIQQPLTNQV
 MPDIVMLQRRMPQTFRDPATAPLRKLSVDLIKTYKHINEVYYAKKRRHQQGGDDSSHKKERKYVNDGY
 DDDNYDYIVKNGEKWMDRYEIDSLIGKSFQVVKAYDRVEQEWVAIKIKNKKAFLNQAQIEVRLLLELM
 NKHDTEMKYYIVHLKRHFMRNHLCLVFEMLSYNLYDLLRNTNFRGVSLSLNLTRKFAQQMCTALLFLATPE
 LSIHCDLKPENILL CNPKRSAIKIVDFGSSCQLGQRIYQYIQSRFYRSPEVLLGMPYDLAIDMWSLGC
 LVEMHTGEPLFSGANEVDQMNKIVEVLGIPPAHILDQAPKARKFFEKL PDGTWNLKTKDKREYKPPGT
 RKLHNLGVETGGPGRRAGESGHTVADYLFKFDLILRMLDYDPKTRIQPYALQHSFFKKTADEGTNTS
 NSVSTSPAMEQSQSSGTTSSSSSGSSGTSNSGRARSDPTHQHRHSGGHFTA AVQAMDCETHSPQVSS
 HVVHLLVSPAILRWSSTGCQVPLE

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

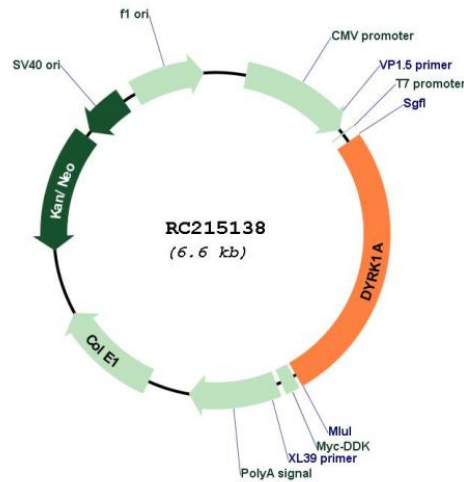
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_101395

ORF Size: 1752 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_101395.2](#)

RefSeq Size: 5315 bp

RefSeq ORF: 1755 bp

Locus ID: 1859

UniProt ID: [Q13627](#)

Cytogenetics: 21q22.13

Protein Families: Druggable Genome, Protein Kinase

MW: 65.9 kDa

Gene Summary:

This gene encodes a member of the Dual-specificity tyrosine phosphorylation-regulated kinase (DYRK) family. This member contains a nuclear targeting signal sequence, a protein kinase domain, a leucine zipper motif, and a highly conservative 13-consecutive-histidine repeat. It catalyzes its autophosphorylation on serine/threonine and tyrosine residues. It may play a significant role in a signaling pathway regulating cell proliferation and may be involved in brain development. This gene is a homolog of *Drosophila* *mnb* (minibrain) gene and rat *Dyrk* gene. It is localized in the Down syndrome critical region of chromosome 21, and is considered to be a strong candidate gene for learning defects associated with Down syndrome. Alternative splicing of this gene generates several transcript variants differing from each other either in the 5' UTR or in the 3' coding region. These variants encode at least five different isoforms. [provided by RefSeq, Jul 2008]