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Product datasheet for RG213280

DYRK1A (NM_130438) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DYRK1A (NM_130438) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	DYRK1A
Synonyms:	DYRK; DYRK1; HP86; MNB; MNBH; MRD7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

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ORF Nucleotide Sequence:

>RG213280 representing NM_130438
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCATACAGGAGGAGAGACTTCAGCATGCAAACCTTCATCTGTTCGGCTTGCACCGTCATTTTCATTCC
ATGCTGCTGGCCTTCAGATGGCTGGACAGATGCCCCATTCACATCAGTACAGTGACCGTCGCCAGCCAAA
CATAAGTGACCAACAGGTTTCTGCCTTATCATATTCTGACCAGATTCAGCAACCTCTAACTAACCAGGTG
ATGCCTGATATTGTCATGTTACAGAGGCGGATGCCCCAAACCTTCCGTGACCCAGCAACTGCTCCCCTGA
GAAAACTTTCTGTTGACTTGATCAAAACATACAAGCATATTAATGAGGTTTACTATGCAAAAAAGAAGCG
AAGACACCAACAGGGCCAGGGAGACGATTCTAGTCATAAGAAGGAACGGAAGGTTTACAATGATGGTTAT
GATGATGATAACTATGATTATATTGTAAAAAACGGAGAAAAGTGGATGGATCGTTACGAAATTGACTCCT
TGATAGGCAAAGGTTCCTTTGGACAGGTTGTAAAGGCATATGATCGTGTGGAGCAAGAATGGGTTGCCAT
TAAAATAATAAAGAACAAGAAGGCTTTTCTGAATCAAGCACAGATAGAAGTGCGACTTCTTGAGCTCATG
AACAAACATGACACTGAAATGAAATACTACATAGTGCATTTGAAACGCCACTTTATGTTTCGAAACCATC
TCTGTTTAGTTTTTGAAATGCTGTCCTACAACCTCTATGACTTGCTGAGAAACACCAATTTCCGAGGGGT
CTCTTTGAACCTAACACGAAAGTTTGCGCAACAGATGTGCACTGCACTGCTTTTCCTTGCGACTCCAGAA
CTTAGTATCATTCACTGTGATCTAAAACCTGAAAATATCCTTCTTTGTAACCCCAAACGCAGTGCAATCA
AGATAGTTGACTTTGGCAGTTCTTGTCAGTTGGGGCAGAGGATATACCAGTATATTCAGAGTCGCTTTTA
TCGGTCTCCAGAGGTGCTACTGGGAATGCCTTATGACCTTGCCATTGATATGTGGTCCCTCGGGTGTATT
TTGGTTGAAATGCACACTGGAGAACCTCTGTTCAGTGGTGCCAATGAGGTAGATCAGATGAATAAAATAG
TGGAAGTTCTGGGTATTCCACCTGCTCATATTCTTGACCAAGCACCAAAAGCAAGAAAGTTCTTTGAGAA
GTTGCCAGATGGCACTTGGAACTTAAAGAAGACCAAAGATGGAAAACGGGAGTACAAACCACCAGGAACC
CGTAAACTTCATAACATTCTTGGAGTGGAAACAGGAGGACCTGGTGGGCGACGTGCTGGGGAGTCAGGTC
ATACGGTCGCTGACTACTTGAAGTTCAAAGACCTCATTTTAAGGATGCTTGATTATGACCCCAAAACTCG
AATTCAACCTTATTATGCTCTGCAGCACAGTTTCTTCAAGAAAACAGCTGATGAAGGTACAAATACAAGT
AATAGTGTATCTACAAGCCCCGCCATGGAGCAGTCTCAGTCTTCGGGCACCACCTCCAGTACATCGTCAA
GCTCAGGTGCGTCAGCAATTTCCTGCTCCTCTTGGTTGGTCAGGCAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

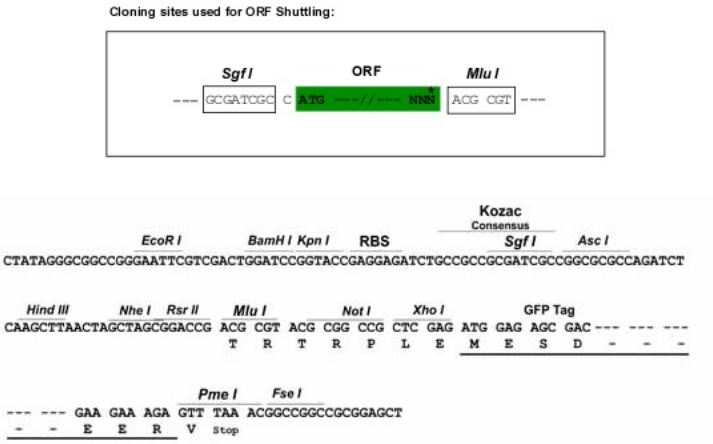
>RG213280 representing NM_130438
Red=Cloning site Green=Tags(s)

MHTGGETSACKPSSVRLAPSFSFHAAGLQMAGQMPHSHQYSDRRQPNISDQQVSALSYSDQIQQPLTNQV
MPDIVMLQRRMPQTFRDPATAPLRKLSVDLIKTYKHINEVYYAKKKRRHQQGQGDDSSHKKERKVYNDGY
DDDNYDYIVKNGEKWMDRYEIDSLIGKGSFGQVVKAYDRVEQEWVAIKIIKNKKAFLNQAQIEVRLLELM
NKHDTEMKYYIVHLKRHFMFRNHLCLVFEMLSYNLYDLLRNTNFRGVSLNLTRKFAQQMCTALLFLATPE
LSIIHCDLKPENILLCNPKRSAIKIVDFGSSCQLGQRIYQYIQSRFYRSPEVLLGMPYDLAIDMWSLGCI
LVEMHTGEPLFSGANEVDQMNKIVEVLGIPPAHILDQAPKARKFFEKLPDGTWNLKKTKDGKREYKPPGT
RKLHNILGVETGGPGGRRAGESGHTVADYLKFKDLILRMLDYDPKTRIQPYYALQHSFFKKTADEGTNTS
NSVSTSPAMEQSQSSGTTSSTSSSSGASAISCSSWLVRH

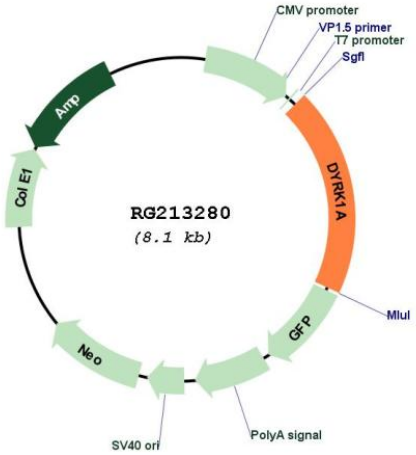
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_130438
ORF Size:	1587 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_130438.2, NP_569122.1
RefSeq Size:	4886 bp
RefSeq ORF:	1590 bp
Locus ID:	1859
UniProt ID:	Q13627
Cytogenetics:	21q22.13
Protein Families:	Druggable Genome, Protein Kinase

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]