

Product datasheet for **RC212355**

Dopamine beta Hydroxylase (DBH) (NM_000787) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dopamine beta Hydroxylase (DBH) (NM_000787) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Dopamine beta Hydroxylase
Synonyms:	DBM; ORTHYP1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC212355 representing NM_000787
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCCGCCTCAGTCGCTGGGCCAGCCTGCCCGCCCCAGCATGCGGGAGGCAGCCTTCATGTACAGCA
 CAGCAGTGGCCATCTTCCTGGTCATCCTGGTGGCCGACTGCAGGGCTCGGCTCCCCGTGAGAGCCCCCT
 CCCCTATCACATCCCCCTGGACCCGAGGGTCCCTGGAGCTCTCATGGAATGTCAGCTACACCCAGGAG
 GCCATCCATTTCCAGCTCCTGGTGGGAGGCTCAAGGCTGGCGTCTGTTTGGGATGTCCGACCGTGGCG
 AGCTTGAGAACGCAGATCTCGTGGTCTGGACCGATGGGGACTGCCTATTTTGGGACGCCTGGAG
 TGACCAGAAGGGGAGATCCACCTGGATCCCCAGCAGGACTACCAGTGTGCAGGTGCAGAGGACCCCA
 GAAGGCCTGACCTGCTTTTCAAGAGGCCCTTTGGCACCTGCGACCCCAAGGATTACCTCATTGARGACG
 GCACTGTCCACTTGGTCTACGGGATCCTGGAGGAGCCGTTCCGGTCACTGGAGGCCATCAACGGCTCGGG
 CCTGCAGATGGGGCTGCAGAGGGTGCAGCTCCTGAAGCCCAATATCCCCGAACCGGAGTTGCCCTCAGAC
 GCGTGCACCATGGAGGTCCAAGCTCCCAATATCCAGATCCCAGCCAGGAGACCAGTACTGGTGTCTACA
 TTAAGGAGCTTCCAAAGGGCTTCTCTCGGCACCAATTATCAAGTACGAGCCCATCGTCACCAAGGGCAA
 TGAGGCCCTTGTCCACCACATGGAAGTCTTCCAGTGCGCCCCGAGATGGACAGCGTCCCCACTTCAGC
 GGGCCCTGCGACTCCAAGATGAAACCCGACCGCCTCAACTACTGCCGCCACGTGTGGCCGCTGGGCC
 TGGGTGCCAAGGCATTTTACTACCCAGAGGAAGCCGGCCTTGCCTTCGGGGTCCAGGGTCTCCAGATA
 TCTCCGCTGGAAGTTCACTACCAACCCACTGGTGTAGAAAGGACGAAACGACTCCTCAGGCATCCGC
 TTGTACTACACAGCCAAGCTGCGGCGCTCAACGCGGGGATCATGGAGCTGGGACTGGTGTACACGCCAG
 TGATGGCCATTCACCACGGGAGACCGCCTTCACTCACTGGTACTGCACGGACAAGTGCACCCAGT
 GGCACTGCCTCCCTCCGGGATCCACATCTTCGCTCTCAGCTCCACACACCTGACTGGGAGAAAGGTG
 GTCACAGTGTGGTCCGGGACGGCCGGGAGTGGGAGATCGTGAACCAGGACAATCACTACAGCCCTCACT
 TCCAGGAGATCCGCATGTTGAAGAAGTCTGTGCGGTCCATCCGGGAGATGTGCTCATCACCTCCTGCAC
 GTACAACCGGAAGACCGGGAGCTGGCCACAGTGGGGGCTTCGGGATCCTGGAGGAGATGTGTGTCAAC
 TACGTGCACTACTACCCAGACGCAGCTGGAGCTCTGCAAGAGCGCTGTGGACGCCGGTCTCCTGCAGA
 AGTACTTCCACCTCATCAACAGGTTCAACAACGAGGATGTCTGCACCTGCCCTCAGGCGTCCGTGTCTCA
 GCAGTTCACTCTGTTCCCTGGAATCCTTCAACCGGACGTACTGAAGGCCCTGTACAGCTTCGCGCCC
 ATCTCCATGCACTGCAACAAGTCTCAGCCGTCGCTTCCAGGGTGAATGGAACCTGCAGCCCTGCCCA
 AGGTCATCTCACACTGGAAGAGCCACCCACAGTGCACCACGACGAGGCCGAAGCCCTGCTGGCCC
 CACCGTTGTCAGCATTGGTGGGGCAAAGGC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

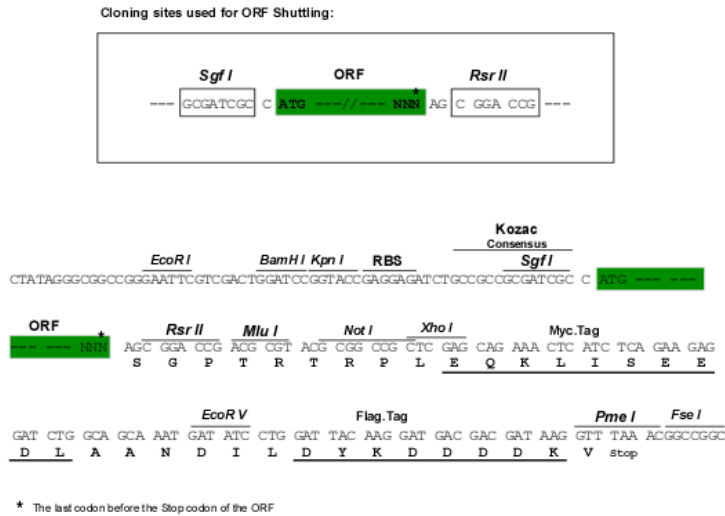
Protein Sequence:

>RC212355 representing NM_000787
 Red=Cloning site Green=Tags(s)

MPALSRWASLPGPSMREAAFMYSTAVAIFLVILVAALQGSAPRESPLPYHIPLDPEGSLELSWNVSYTQE
 AIHFQLLVRRLLKAGVLFGMSDRGELNADLVVLWTDGDTAYFADAWSQKQIHLDPQQDYQLLQVQRTPE
 EGLTLLFKRPFGTCDPKDYLI XDGTVHLVYGILEEPFRSLEAINGSGLQMLQRVQLLKPNIPEPELPSD
 ACTMEVQAPNIQIPSQETTYWCYIKELPKGFSRHHIIKYEPIVTKGNEALVHHMEVFQCAPEMDSVPHFS
 GPCDSKMKPDRLNYCRHVLAAWALGAKAFYYPEEAGLAFGGPGSSRYLRLEVHYHNPLVIEGRNDSGIR
 LYYTAKLRRFNAGIMELGLVYTPVMAIPPRETAFILTYGCTDKCTQLALPPSGIHIFASQLHHLTGRKV
 VTVLVRDGREWEIVNQDNHYSFHFQEIIRMLKVVSVHPGDVLTISCTYNTEDRELATVGGFGILEEMCVN
 YVHYYPQTQLELCKSAVDAGFLQKYFHLINRFNNEVDVCTCPQASVSQQFTSVPWNFSFNRDVLKALYSFAP
 ISMHCNKSSAVRFQGEWNLQPLPKVISTLEEPTQCPTSQGRSPAGPTTVSISGGGK

SGP**TRRRLEQKLI**SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1399_g08.zip
Restriction Sites: SgfI-RsrII
Cloning Scheme:



ACCN: NM_000787

ORF Size: 1851 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

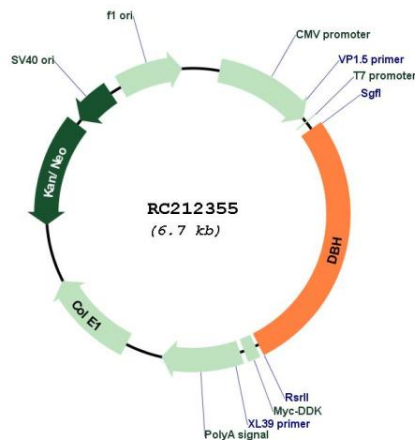
RefSeq: [NM_000787.3](#), [NP_000778.3](#)

RefSeq Size: 2812 bp

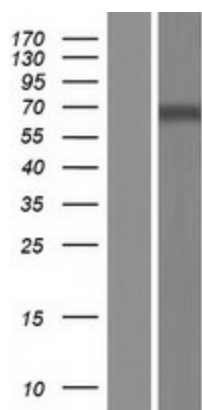
RefSeq ORF: 1854 bp
Locus ID: 1621
UniProt ID: [P09172](#)
Cytogenetics: 9q34.2
Protein Families: Druggable Genome, Secreted Protein, Transmembrane
Protein Pathways: Metabolic pathways, Tyrosine metabolism
MW: 69.06 kDa

Gene Summary: The protein encoded by this gene is an oxidoreductase belonging to the copper type II, ascorbate-dependent monooxygenase family. The encoded protein, expressed in neurosecretory vesicles and chromaffin granules of the adrenal medulla, catalyzes the conversion of dopamine to norepinephrine, which functions as both a hormone and as the main neurotransmitter of the sympathetic nervous system. The enzyme encoded by this gene exists in both soluble and membrane-bound forms, depending on the absence or presence, respectively, of a signal peptide. Mutations in this gene cause dopamine beta-hydroxylase deficiency in human patients, characterized by deficits in autonomic and cardiovascular function, including hypotension and ptosis. Polymorphisms in this gene may play a role in a variety of psychiatric disorders. [provided by RefSeq, Aug 2017]

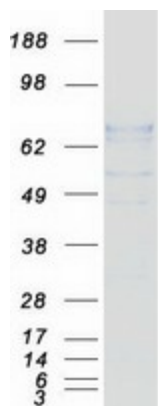
Product images:



Circular map for RC212355



Western blot validation of overexpression lysate (Cat# [LY424519]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212355 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified DBH protein (Cat# [TP312355]). The protein was produced from HEK293T cells transfected with DBH cDNA clone (Cat# RC212355) using MegaTran 2.0 (Cat# [TT210002]).