

Product datasheet for **RC219037**

DOPA Decarboxylase (DDC) (NM_001082971) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DOPA Decarboxylase (DDC) (NM_001082971) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DOPA Decarboxylase
Synonyms:	AADC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC219037 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAACGCAAGTGAATCCGAAGGAGAGGGAAGGAGATGGTGGATTACGTGGCCAACTACATGGAAGGCA
 TTGAGGGACGCCAGGTCTACCCTGACGTGGAGCCCGGTACCTGCGGCCGCTGATCCCTGCCGCTGCCCC
 TCAGGAGCCAGACACGTTTGAGGACATCATCAACGACGTTGAGAAGATAATCATGCCTGGGGTGACGCAC
 TGGCACAGCCCCTACTTCTTCGCTACTTCCCCACTGCCAGCTCGTACCCGGCCATGCTTGCGGACATGC
 TGTGCGGGGCCATTGGCTGCATCGGCTTCTCCTGGGCGGCAAGCCAGCATGCACAGAGCTGGAGACTGT
 GATGATGGACTGGCTCGGAAGATGCTGGAACACAAAGGCATTTTTGAATGAGAAAGCTGGAGAAGGG
 GGAGGAGTGATCCAGGAAGTCCAGTGAAGCCACCCTGGTGGCCCTGCTGGCCGCTCGGACCAAAGTGA
 TCCATCGGCTGCAGGCAGCGTCCCAGAGCTCACACAGGCCGCTATCATGGAGAAGCTGGTGGCTTACTC
 ATCCGATCAGGCACACTCCTCAGTGAAGAGCTGGGTTAATTGGTGGAGTGAATTTAAAGCCATCCCC
 TCAGATGGCAACTTCGCCATGCGTGCCTGTCCTGTCAGGAAGCCCTGGAGAGACAAAGCGGCTGGCC
 TGATTCCTTTCTTTATGGTTGCCACCCTGGGGACCACAACATGCTGCTCCTTTGACAATCTCTTAGAAGT
 CGGTCTATCTGCAACAAGGAAGACATATGGTGCACGTTGATGCAGCCTACGCAGGCAGTGCAATTCATC
 TGCCCTGAGTTCGGCACCTTCTGAATGGAGTGGAGTTTGAGATTCACTTAACTTTAATCCCCACAAT
 GGCTATTGGTGAATTTGACTGTTCTGCCATGTGGGTGAAAAAGAGAACAGACTTAACGGGAGCCTTTAG
 ACTGGACCCCACTACCTGAAGCACAGCCATCAGGATTCAGGGCTTACTACTGACTACCGGCATTGGCAG
 ATACCATTGGGCAGAAGATTTGCTCTTTGAAAATGTGGTTTGTATTTAGGATGTATGGAGTCAAAGGCA
 TGCAGGCTTATATCCGCAAGCATGTCCAGCTGTCCCATGAGTTTGAGTCACTGGTGGCCAGGATCCCCG
 CTTTGAATCTGTGTGGAAGTCATTCTGGGCTTGTCTGCTTTCCGCTAAAGGGTTCCAACAAGTGAAT
 GAAGCTCTTCTGCAAAGAATAAACAGTGCCAAAAAAATCCAATTGGTTCCATGTACCTCAGGGACAAGT
 TTGCTCTGCGCTTTGCCATCTGTTCTCGCACGGTGAATCTGCCATGTGCAGCGGGCCTGGGAACACAT
 CAAAGAGCTGGCGGCCGACGTGCTGCGAGCAGAGGGAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC219037 protein sequence
 Red=Cloning site Green=Tags(s)

MNASEFRRRGKEMVDYVANYMEGIEGRQVYPDVEPGYLRPLIPAAAPQEPDTFEDIINDVEKIIIMPGVTH
 WHSPYFFAYFPTASSYPAMLADMLCGAIGCIGFSWAASPACELETVMMDWLGKMLELPAFLNEKAGEG
 GGVIQGSASEATLVALLAARTKVIHRLQAASPELTQAAMEKLVAYSSDQAHSSVERAGLIGGVKLIKAIIP
 SDGNFAMRASALQEALERDKAAGLIPFFMVATLGTTCSSFDNLLLEVGPICNKEDIWLHVDAAYAGSAFI
 CPEFRHLLNGVEFADSFNPNHWLLVNFDCSAMWVKRDLTGAFRLDPTYLKHSHQDGLITDYRHWQ
 IPLGRRFRSLKMWVFRMYGVKGLQAYIRKHVQLSHEFESLVRQDPRFEICVEVILGLVCFRLKGSNKVN
 EALLQRINSAKKIHLVPCHLRDKFVLRFAICSRTVESAHVQRAWEHIKELAADVLAERE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6675_h10.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001082971

ORF Size: 1440 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_001082971.1](#), [NP_001076440.1](#)

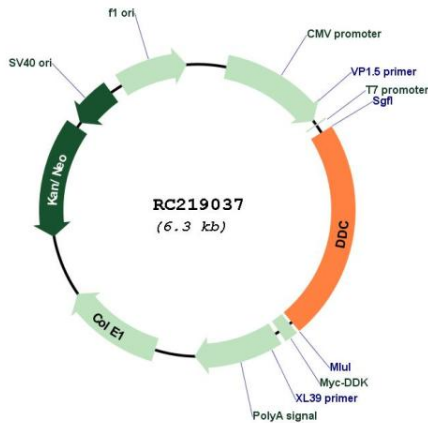
RefSeq Size: 2090 bp

RefSeq ORF: 1443 bp

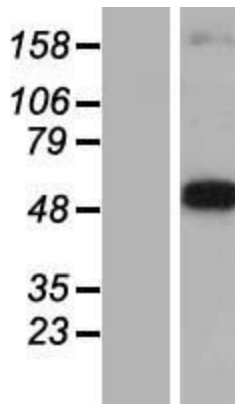
Locus ID: 1644

UniProt ID: [P20711](#)
Cytogenetics: 7p12.2-p12.1
Protein Families: Druggable Genome
Protein Pathways: Histidine metabolism, Metabolic pathways, Phenylalanine metabolism, Tryptophan metabolism, Tyrosine metabolism
MW: 53.9 kDa
Gene Summary: The encoded protein catalyzes the decarboxylation of L-3,4-dihydroxyphenylalanine (DOPA) to dopamine, L-5-hydroxytryptophan to serotonin and L-tryptophan to tryptamine. Defects in this gene are the cause of aromatic L-amino-acid decarboxylase deficiency (AADCD). AADCD deficiency is an inborn error in neurotransmitter metabolism that leads to combined serotonin and catecholamine deficiency. Multiple alternatively spliced transcript variants encoding different isoforms have been identified for this gene. [provided by RefSeq, Jun 2011]

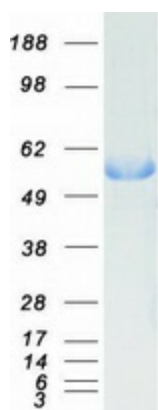
Product images:



Circular map for RC219037



Western blot validation of overexpression lysate (Cat# [LY421202]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219037 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified DDC protein (Cat# [TP319037]). The protein was produced from HEK293T cells transfected with DDC cDNA clone (Cat# RC219037) using MegaTran 2.0 (Cat# [TT210002]).