

Product datasheet for **RC223889**

PADI2 (NM_007365) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PADI2 (NM_007365) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PADI2
Synonyms:	PAD-H19; PAD2; PDI2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC223889 representing NM_007365
Red=Cloning site Blue=ORF Green=Tags(s)

CTATAGGGCGGCCGGGAATTCGTCTGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCCGGCGC
GCC

ATGCTGCGGAGCGGACCGTGCCTGTCAGTACGGAGCCGCGTGGAGGCGGTGTACGTGCTGGCACCT
ACCTCTGGACCGATGTCTACAGCGCGGCCAGCCGGGGCCAAACCTTCAGCCTGAAGCACTCGGAACA
CGTGTGGGTGGAGGTGGTGCCTGATGGGAGGCTGAGGAGGTGGCCACCAATGGCAAGCAGCGCTGGCTT
CTCTCGCCAGCACCACCTGCGGGTACCATGAGCCAGGCGAGCACCGAGGCCAGCAGTGACAAGGTCA
CCGTCAACTACTATGACGAGGAAGGAGCATTCCCATCGACCAGGCGGGCTCTTCTCACAGCCATTGA
GATCTCCCTGGATGTGGACGCAGACCGGGATGGTGTGGTGGAGAAGAACAACCCAAAGAAGGCATCTGG
ACCTGGGGCCCGAGGGCCAGGGGGCCATCCTGCTGGTGAAGTGTGACCGAGAGACACCCTGGTTGCCCA
AGGAGGACTGCCGTGATGAGAAGGTCTACAGCAAGGAAGATCTCAAGGACATGTCCAGATGATCCTGCG
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CCCCGACGAGGGCTTCTCAGGCCTGGTCTCCATCCATGTGACGCTGCTGGAGTACATGGCCAGGACATT
CCCCTGACTCCCATCTTACGGACACCGTGATATTCGGATTGCTCCGTGGATCATGACCCCAACATCC
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CTGACAGAGCAGGACATCATTGACTGCCCGCTCTGTTCAAGATGGACGAGGACCACCGTCCAGAGCCT
TCTTCCCAACATGGTGAACATGATCGTCTGGACAAGGACCTGGGCATCCCAAGCCATTTCGGGCCACA
GGTTGAGGAGGAATGCTGCCTGGAGATGCAGTGCCTGGCCTCCTGGAGCCCCTGGGCTCGAATGCACC
TTCATCGACGACATTTCTGCCTACCACAAATTTCTGGGGAAAGTCCACTGTGGCACAACGTCCGCAGGA
AGCCCTTACCTTCAAGTGGTGGACATGGTGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC223889 representing NM_007365
Red=Cloning site Green=Tags(s)

MLRERTVRLQYGSRVEAVYVLTGYLWTDVYSAAPAGAQTFLKHSEHVWVEVVRDGEAEVATNGKQRWL
 LSPSTTLRVTMSQASTEASSDKVTVNYDEEGSIPIDQAGLFLTAIEISLDVDADRDRGVVEKNNPKKASW
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 KVGVFYVENPFFGQRYIHILGRRKLYHVVKYTGGSSELLFFVEGLCFPDEGFSGLVSIHVSLLLEYMAQDI
 PLTPIFTDTVIFRIAPWIMTPNILPPVSVFVCCMKDNYLFLKEVKNLVEKTNCELKVCFYLNRGDRWIQ
 DEIEFGYIEAPHKGFVVLDSPRDGNLKDVPVKELLGPDFGYVTREPLFESVTSLDSFGNLEVSPVTVN
 GKTYPLGRILIGSSFPLSGRRMTKVVRDFLKAQQVQAPVELYSDWLVGHVDEFMSFVPIPGTKKFLLL
 MASTSACYKLFREKQKDGHEAIFKGLGGMSSKRITINKILSNESLVQENLYFQRCLDWNDRDILKKELG
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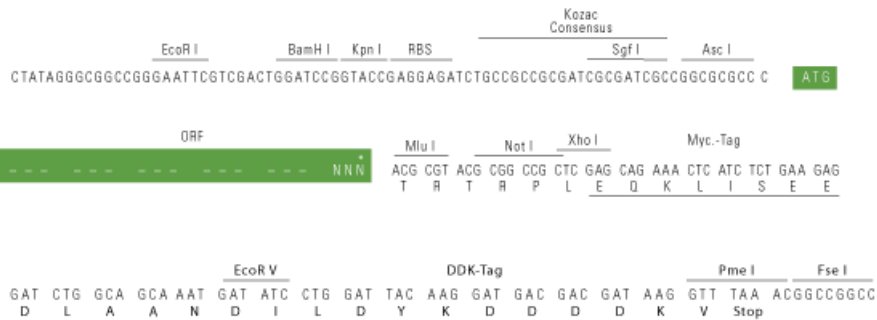
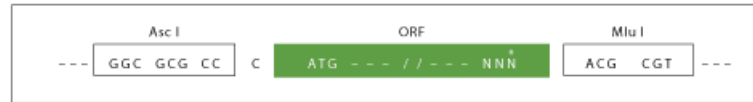
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Chromatograms: https://cdn.origene.com/chromatograms/mg3141_e01.zip

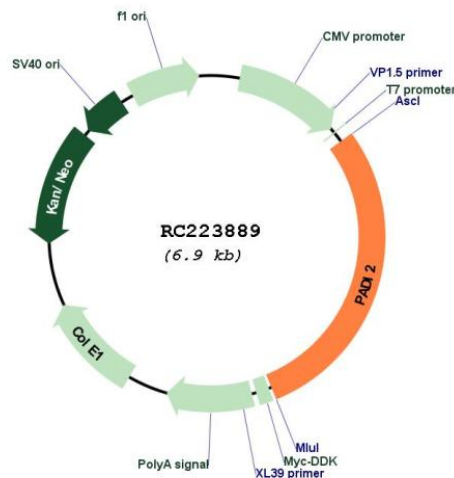
Restriction Sites: AscI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_007365

ORF Size: 1995 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_007365.3](#)

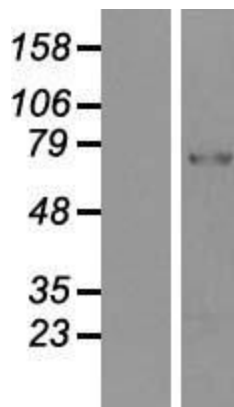
RefSeq Size: 2348 bp

RefSeq ORF: 1998 bp

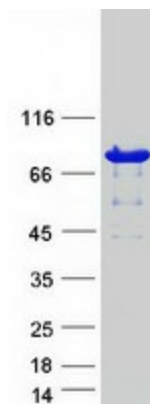
Locus ID: 11240
UniProt ID: [Q9Y2J8](#)
Cytogenetics: 1p36.13
Domains: PAD
MW: 75.4 kDa

Gene Summary: This gene encodes a member of the peptidyl arginine deiminase family of enzymes, which catalyze the post-translational deimination of proteins by converting arginine residues into citrullines in the presence of calcium ions. The family members have distinct substrate specificities and tissue-specific expression patterns. The type II enzyme is the most widely expressed family member. Known substrates for this enzyme include myelin basic protein in the central nervous system and vimentin in skeletal muscle and macrophages. This enzyme is thought to play a role in the onset and progression of neurodegenerative human disorders, including Alzheimer disease and multiple sclerosis, and it has also been implicated in glaucoma pathogenesis. This gene exists in a cluster with four other paralogous genes. [provided by RefSeq, Jul 2008]

Product images:



Western blot validation of overexpression lysate (Cat# [LY416014]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223889 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PADI2 protein (Cat# [TP323889]). The protein was produced from HEK293T cells transfected with PADI2 cDNA clone (Cat# RC223889) using MegaTran 2.0 (Cat# [TT210002]).