OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC226185

Ataxin 1 (ATXN1) (NM_001128164) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ataxin 1 (ATXN1) (NM_001128164) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ataxin 1
Synonyms:	ATX1; D6S504E; SCA1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC226185 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAATCCAACCAAGAGCGGAGCAACGAATGCCTGCCTCCCAAGAAGCGCGAGATCCCCGCCACCAGCC
GGTCCTCCGAGGAGAAGGCCCCTACCCTGCCCAGCGACAACCACCGGGTGGAGGGCACAGCATGGCTCCC
GGGCAACCCTGGTGGCCGGGGCCACGGGGGCGGGAGGCATGGGCCGGCAGGGACCTCGGTGGAGCTTGGT
TTACAACAGGGAATAGGTTTACACAAAGCATTGTCCACAGGGCTGGACTACTCCCCGCCCAGCGCTCCCA
GGTCTGTCCCCGTGGCCACCACGCTGCCTGCCGCGTACGCCACCCCGCAGCCAGGGACCCCGGTGTCCCC
CGTGCAGTACGCTCACCTGCCGCACACCTTCCAGTTCATTGGGTCCTCCCAATACAGTGGAACCTATGCC
AGCTTCATCCCATCACAGCTGATCCCCCCAACCGCCAACCCCGTCACCAGTGCAGTGGCCTCGGCCGCAG
GGGCCACCACTCCATCCCAGCGCTCCCAGCTGGAGGCCTATTCCACTCTGCTGGCCAACATGGGCAGTCT
GAGCCAGACGCCGGGACACAAGGCTGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCATCAG
CATCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCACCTCAGCAGGGCTCCGGGGCTCA
TCACCCCGGGGTCCCCCCCACCAGCCCAGCAGAACCAGTACGTCCACATTTCCAGTTCTCCGCAGAACAC
CGGCCGCACCGCCTCTCCTCCGGCCATCCCCGTCCACCTCCACCCCCACCAGACGATGATCCCACACACG
CTCACCCTGGGGCCCCCCTCCCAGGTCGTCATGCAATACGCCGACTCCGGCAGCCACTTTGTCCCTCGGG
AGGCCACCAAGAAAGCTGAGAGCAGCCGGCTGCAGCAGGCCATCCAGGCCAAGGAGGTCCTGAACGGTGA
GATGGAGAAGAGCCGGCGGTACGGGGCCCCGTCCTCAGCCGACCTGGGCCTGGGCAAGGCAGGCGGCAAG
TCGGTTCCTCACCCGTACGAGTCCAGGCACGTGGTGGTCCACCCGAGCCCCTCAGACTACAGCAGTCGTG
ATCCTTCGGGGGTCCGGGCCTCTGTGATGGTCCTGCCCAACAGCAACACGCCCGCAGCTGACCTGGAGGT
GCAACAGGCCACTCATCGTGAAGCCTCCCCTTCTACCCTCAACGACAAAAGTGGCCTGCATTTAGGGAAG
CCTGGCCACCGGTCCTACGCGCTCTCACCCCACACGGTCATTCAGACCACACACAGTGCTTCAGAGCCAC
TCCCGGTGGGACTGCCAGCCACGGCCTTCTACGCAGGGACTCAACCCCCTGTCATCGGCTACCTGAGCGG
CCAGCAGCAAGCAATCACCTACGCCGGCAGCCTGCCCCAGCACCTGGTGATCCCCGGCACACAGCCCCTG
CTCATCCCGGTCGGCAGCACTGACATGGAAGCGTCGGGGGCAGCCCCGGCCATAGTCACGTCATCCCCCC
AGTTTGCTGCAGTGCCTCACACGTTCGTCACCACCGCCCTTCCCAAGAGCGAGAACTTCAACCCTGAGGC
CCTGGTCACCCAGGCCGCCTACCCAGCCATGGTGCAGGCCCAGATCCACCTGCCTGTGGTGCAGTCCGTG
GCCTCCCCGGCGGCGGCTCCCCCTACGCTGCCTCCCTACTTCATGAAAGGCTCCATCATCCAGTTGGCCA
ACGGGGAGCTAAAGAAGGTGGAAGACTTAAAAACAGAAGATTTCATCCAGAGTGCAGAGATAAGCAACGA
CCTGAAGATCGACTCCAGCACCGTAGAGAGGATTGAAGACAGCCATAGCCCGGGCGTGGCCGTGATACAG
TTCGCCGTCGGGGAGCACCGAGCCCAGGTCAGCGTTGAAGTTTTGGTAGAGTATCCTTTTTTTGTGTTTG
GACAGGGCTGGTCATCCTGCTGTCCGGAGAGAACCAGCCAGCTCTTTGATTTGCCGTGTTCCAAACTCTC
AGTTGGGGATGTCTGCATCTCGCTTACCCTCAAGAACCTGAAGAACGGCTCTGTTAAAAAGGGCCAGCCC
GTGGATCCCGCCAGCGTCCTGCTGAAGCACTCAAAGGCCGACGGCCTGGCGGGCAGCAGACACAGGTATG
CCGAGCAGGAAAACGGAATCAACCAGGGGAGTGCCCAGATGCTCTCTGAGAATGGCGAACTGAAGTTTCC
AGAGAAAATGGGATTGCCTGCAGCGCCCTTCCTCACCAAAATAGAACCCAGCAAGCCCGCGGCAACGAGG
AAGAGGAGGTGGTCGGCGCCAGAGAGCCGCAAACTGGAGAAGTCAGAAGACGAACCACCTTTGACTCTTC
CTAAGCCTTCTCTAATTCCTCAGGAGGTTAAGATTTGCATTGAAGGCCGGTCTAATGTAGGCAAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC226185 protein sequence
Red=Cloning site Green=Tags(s)

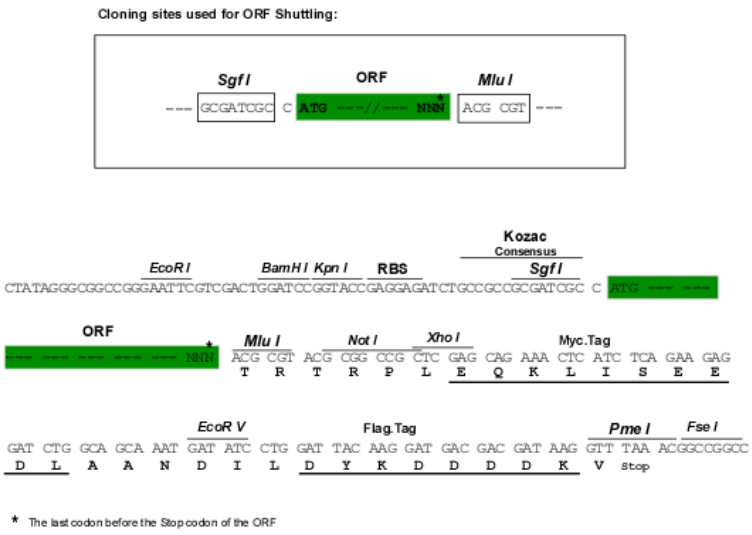
MKSNQERSNECLPPKKREIPATSRSSEEKAPTLPSDNHRVEGTAWLPGNPGGRGHGGGRHGPAGTSVELG
LQQGIGLHKALSTGLDYSPPSAPRSVPVATTLPAAYATPQPGTPVSPVQYAHLPHTFQFIGSSQYSGTYA
SFIPSQLIPPTANPVTSAVASAAGATTPSQRSQLEAYSTLLANMGSLSQTPGHKAEQQQQQQQQQQQQHQ
HQQQQQQQQQQQQQQHLSRAPGLITPGSPPPAQQNQYVHISSSPQNTGRTASPPAIPVHLHPHQTMIPHT
LTLGPPSQVVMQYADSGSHFVPREATKKAESSRLQQAIQAKEVLNGEMEKSRRYGAPSSADLGLGKAGGK
SVPHPYESRHVVVHPSPSDYSSRDPSGVRASVMVLPNSNTPAADLEVQQATHREASPSTLNDKSGLHLGK
PGHRSYALSPHTVIQTTHSASEPLPVGLPATAFYAGTQPPVIGYLSGQQQAITYAGSLPQHLVIPGTQPL
LIPVGSTDMEASGAAPAIVTSSPQFAAVPHTFVTTALPKSENFNPEALVTQAAYPAMVQAQIHLPVVQSV
ASPAAAPPTLPPYFMKGSIIQLANGELKKVEDLKTEDFIQSAEISNDLKIDSSTVERIEDSHSPGVAVIQ
FAVGEHRAQVSVEVLVEYPFFVFGQGWSSCCPERTSQLFDLPCSKLSVGDVCISLTLKNLKNGSVKKGQP
VDPASVLLKHSKADGLAGSRHRYAEQENGINQGSAQMLSENGELKFPEKMGLPAAPFLTKIEPSKPAATR
KRRWSAPESRKLEKSEDEPPLTLPKPSLIPQEVKICIEGRSNVGK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6463_c09.zip

Restriction Sites: SgfI-MluI

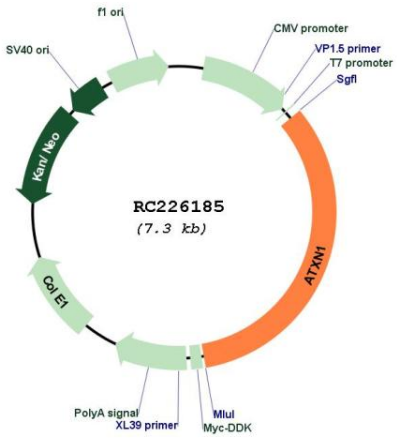
Cloning Scheme:



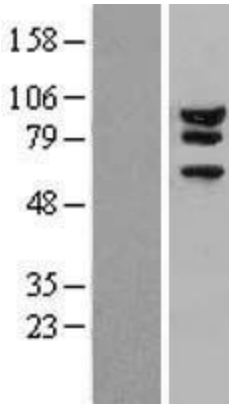
ACCN:	NM_001128164
ORF Size:	2445 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its 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_001128164.2
RefSeq Size:	10587 bp
RefSeq ORF:	2448 bp
Locus ID:	6310
UniProt ID:	P54253
Cytogenetics:	6p22.3
MW:	86.9 kDa
Gene Summary:	The autosomal dominant cerebellar ataxias (ADCA) are a heterogeneous group of neurodegenerative disorders characterized by progressive degeneration of the cerebellum, brain stem and spinal cord. Clinically, ADCA has been divided into three groups: ADCA types I-III. ADCAI is genetically heterogeneous, with five genetic loci, designated spinocerebellar ataxia (SCA) 1, 2, 3, 4 and 6, being assigned to five different chromosomes. ADCAII, which always presents with retinal degeneration (SCA7), and ADCAIII often referred to as the `pure' cerebellar syndrome (SCA5), are most likely homogeneous disorders. Several SCA genes have been cloned and shown to contain CAG repeats in their coding regions. ADCA is caused by the expansion of the CAG repeats, producing an elongated polyglutamine tract in the corresponding protein. The expanded repeats are variable in size and unstable, usually increasing in size when transmitted to successive generations. The function of the ataxins is not known. This locus has been mapped to chromosome 6, and it has been determined that the diseased allele contains 40-83 CAG repeats, compared to 6-39 in the normal allele, and is associated with spinocerebellar ataxia type 1 (SCA1). Alternative splicing results in multiple transcript variants, with one variant encoding multiple distinct proteins, ATXN1 and Alt-ATXN1, due to the use of overlapping alternate reading frames. [provided by RefSeq, Nov 2017]

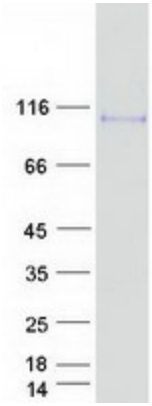
Product images:



Circular map for RC226185



Western blot validation of overexpression lysate (Cat# [LY426904]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC226185 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ATXN1 protein (Cat# [TP326185]). The protein was produced from HEK293T cells transfected with ATXN1 cDNA clone (Cat# RC226185) using MegaTran 2.0 (Cat# [TT210002]).